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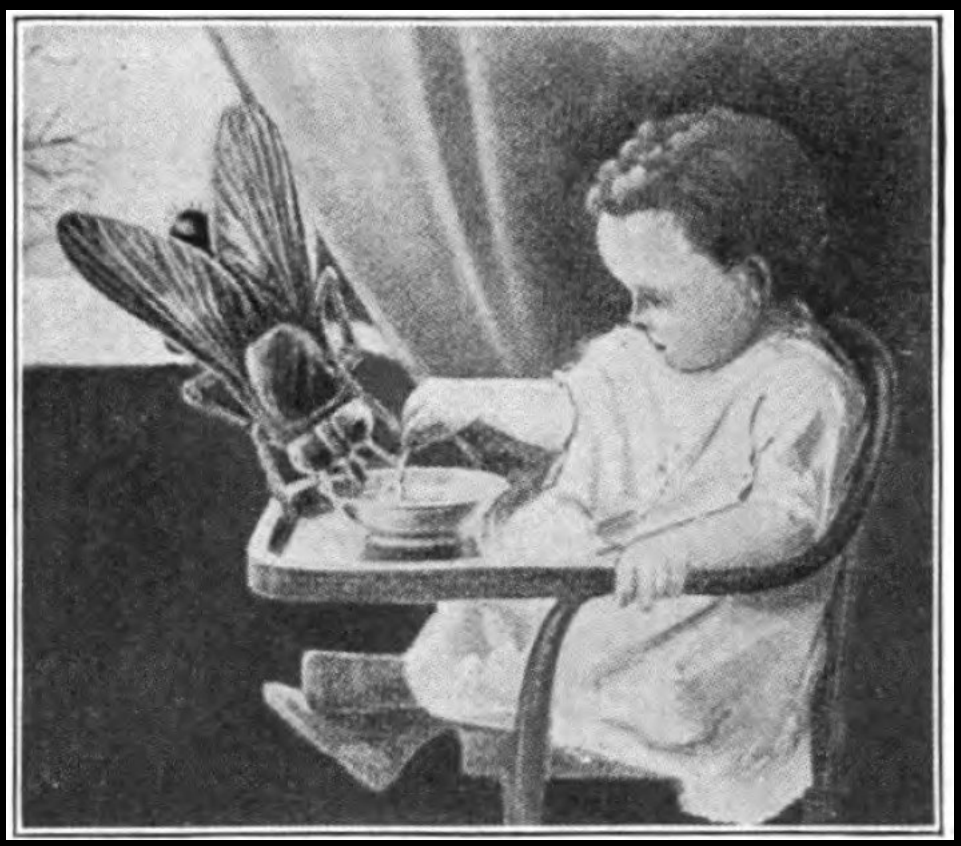

The Magic Lantern Society of
the United States and Canada

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With 28 pages and three articles, this issue of the *Gazette* is a fairly long one. It also is unusual in having all of the articles focused on a single theme, the magic lantern and medicine.

Stephen Bottomore starts off with a look at the beginnings of the use of the magic lantern for propaganda about public health in both Britain and the United States, following the widespread use of the lantern by the Temperance Movement and other social reform efforts. He argues that while illustrated medical lectures were given throughout the late 19th century, organized public health campaigns using the lantern appeared relatively late, in the early 20th century. He discusses several examples in detail.

This is followed by my own article on illustrated medical lectures in 19th century America. Both of us used online newspaper databases for our research, but different specific databases. This provides a somewhat independent test of Bottomore's hypothesis that public health campaigns using the lantern developed relatively late. I found the same basic pattern, with the exception of the work of Charles F. Chandler in the 1870s and 1880s. As President of the New York Board of Health, Chandler led efforts in New York to clean up unsanitary conditions and improve living conditions, especially in the city's squalid tenements. He also gave lantern lectures on these efforts, anticipating the later work of Jacob Riis and others.

Starting in the years around 1910, there were extensive public health propaganda efforts using the magic lantern, including a national obsession with controlling the common house fly, thought at the time to be a major vector for infectious disease.

Dick Moore contributes a piece with a somewhat different focus, a set of lantern slides apparently used to warn audiences about the history and dangers of patent medicines, largely worthless concoctions that claimed to cure all manner of ailments.

There also are short summaries of academic research articles and book chapters on magic lantern related topics on The Research Page.

I close by issuing my usual plea for more articles for the *Gazette*. At this point I do not have any material for the next issue. I encourage anyone doing research on magic lanterns and related topics to submit articles to the *Gazette*, which can accommodate anything from three or four pages to 30 pages or more.

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In addition to patent medicines, Dick Moore's slide set includes an image of this bizarre device to prevent baldness (spoiler alert: it did not work).

The Origins of Public Health Education on the Lantern Screen

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In the sciences it is standard practice to formulate a hypothesis, which will then be tested to find out if it true or not. In history too, the formulation of hypotheses is a not unusual practice.[1]

In August 2017 at the Utrecht 'Million Pictures' conference, I presented a brief paper based on my hypothesis that the use of the lantern for public health education was a relatively late development in the history of the medium. I stated the following:

> The magic lantern was employed for various purposes from the nineteenth century, including for education, travelogues, news reports, temperance and religious propaganda, advertising, and for the presentation of fictional narratives. In many cases considerable documentation still exists about the circumstances of such projections, and some of the original lantern slides often survive.
>
> But I find that for one of the potential applications of the magic lantern there seems to be a surprising scarcity of surviving material, and that is its use for public health education and propaganda. I have found only a few documented cases from the Victorian era of the employment of lantern projection to spread public health advice and information (e.g. advice on how to prevent and avoid infectious diseases), and I have seen no surviving slides from the nineteenth century on such themes—though some do survive from the early twentieth century.

Some participants at the conference took issue with my hypothesis, and gave examples of the use of lantern slides for public health education in the 19th century. The case for Japan seems particularly strong, and we were shown lantern slides that were used in that country to educate the public on health issues from before 1900. In the weeks following the conference I did more research, especially in digitized sources, most notably in the "Hathi" and "Chronicling America" (Library of Congress) websites, and in the disc version of the *Optical Magic Lantern Journal*.

These sources are undoubtedly biased toward the Anglo-Saxon world, as most of my previous research on this subject had been, so my arguments should be seen in this context (although I did do some research on the French website, "Gallica"). I might as well state at this point that I see little reason to fundamentally change my original, tentative conclusion, which was that the lantern 'came late to the table' in terms of public health propaganda. I think there are good reasons for that, and I'll first briefly deal with those before looking at some evidence for and against my hypothesis.

The modern public health movement is often said to have begun in Britain in the 1840s. The first actions tended to be based on 'engineering': i.e. building sewers and other infrastructure to remove infection-causing materials from cities. The next stage was to *educate* people in issues of health, so they had the knowledge to improve their lives. Clearly the first to benefit from this were the wealthier classes, who had the funds and the contacts to buy the books and attend the lectures where the new knowledge was being promulgated. Health education for the lower orders came later. Some historians have argued, convincingly, that the principal reasons that widespread public health education campaigns only started in the early 20th century were economic and military. Workers who got sick were less productive; workers who were unhealthy could not serve in the military. On the latter issue, the moment of realization in Britain was the Boer War (1899-1902), while in the USA it was in World War I (1914-1918). In both cases many potential recruits had to be rejected for lack of fitness.[2]

It would be unfair, however, to say that economics and military were the only reasons for a boom in widespread public health education (PHE) measures from the early 20th century. Some of those involved in promoting these movements were guided by simple benevolence. For example, the upper middle class people who founded and ran the Women's Imperial Health Association (active in Britain from about 1909 to the early 1920s) simply wanted to improve the people's health. To do this more effectively they used the

latest visual aids, and the Association probably was the first organization in the world to use film for health education (from 1910).[3] They combined film with lantern projection, the latter technology being far older than film, though without—as I will argue—a very extensive early history of use for health education.

What is, and is not, lantern public health education (PHE)?

I began my research by looking for instances of lantern PHE in the existing secondary sources, and I could find almost nothing. For example, the excellent *Encyclopaedia of the Magic Lantern* records various uses of the lantern for education and demonstration (geography, history, microscopy, etc.), but only mentions one application for health promotion: by a popular education association in Finland, which started using the lantern from 1899 and included health ('hygiene') as one subject among others.[4]

Then I turned to primary sources and did find instances of lantern-related health and medical issues in the 19th century. Some of these instances seemed relevant and some less so, bearing in mind that I was specifically looking for use of the lantern as PHE, to advise and persuade ordinary people on how to improve their health. Under this definition, some apparent incidences of the lantern for health education are actually something else, and to make this clearer, I now list these 'dubious candidates' under the following categories, starting with the ones that we can exclude most easily:

1. Life model slides about the heartache of illness and death

A considerable number of such slide sets were made and distributed. For example, NEDDIE'S CARE; OR, SUFFER THE LITTLE CHILDREN (Bamforth & Co., 25 slides, 1887). Certainly such slide sets pass our tests of being health-related and screened to ordinary people, but equally surely such slides did not, and were not designed to, dispense health advice.

2. Medical slides (anatomy, etc.)

Many of these were produced and sold in the 19th and early 20th centuries. Let us look at just one catalogue, that by E. G. Wood, distributed c.1912-13 (and held in the Bill Douglas Centre). On page 240 are listed three sets of slides about anatomy (e.g. one slide depicts 'transverse section of an artery and a vein'), and first aid. It seems unlikely that such sets would have been shown to a general audience.

3. Health education lantern lectures to expert, not lay, audiences

In searching the websites mentioned above, I came across quite a few instances of lantern lectures on health delivered to specialist audiences. For example, at the Smithsonian Institution in Washington DC, in May 1881, Dr. George Sternberg (Fig. 1), Secretary of the National Board of Health, showed photographic slides illustrating microscopic organisms that grow in the human mouth and other parts of the body. His communication was discussed by the assembled professors and doctors.[5] Other examples could be given, such as a lecture on drinking water at the Columbian University, Washington DC, twelve years later.[6] One could define such lantern lectures as health education, but one could not characterize them as promulgating health propaganda to the public–except indirectly via the experts who attended.

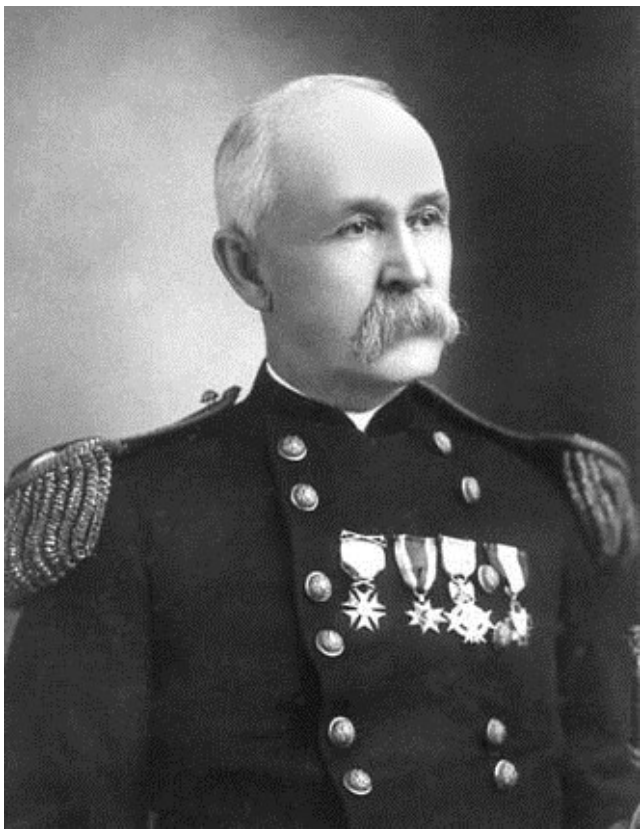


Fig. 1. Brigadier General George M. Sternberg (1838-1915) was a U.S. Army physician and America's first bacteriologist. He was Army Surgeon General from 1893 to 1902. Wikimedia.

4. Lantern lectures on moral issues, perhaps with some health education included.

In this category I include first the lantern slides shown by missionary and temperance organizations. These undoubtedly reached the general population (for example, being delivered from horse wagons that toured the UK) and sometimes, it seems, they included an element of health or dietary advice, but the main message was religious and/or temperance.[7] Secondly, I might also include lectures on sexual health, for here again the principal aim and motivation was an ethical one, rather than health *per se*. Such sexual hygiene lantern lectures were being given in France at the turn of the 19th/20th centuries: lecturers found the slides 'indispensable' in gaining the attention of the working class audiences.[8] An even earlier example is a Quaker doctor, Mrs Longshore Potts who lectured in various parts of the world in the 1890s on avoiding venereal disease and on the "connection between good health and good morals."[9]

5. Health education lantern slides where the spectatorship is unstated

A number of slide series on public health issues were produced where it is not stated whether they were to be shown exclusively to professional spectators or to general audiences. The 'Lucerna' website conveniently provides three examples:

> a) THE BREATH OF LIFE: A LANTERN LECTURE ON FRESH AIR (lecture: Bamforth & Co., 43 slides, 1901).[10] This, like the following slide set, was designed to explain the value of breathing fresh air, which was a health mantra in that period especially in relation to pulmonary tuberculosis (aka "TB" or "consumption").
>
> b) THE OPEN AIR CURE FOR CONSUMPTION (lecture: Newton & Co., 83 slides, 1903-1913).
>
> c) HYGIENE: KNIGHT'S SERIES (lecture: Newton & Co., 190 slides, in/before 1913). A smaller set with a mere 12 slides and the same title was available from Newton in 1895.[11]

I suggest that because such slide sets generally covered the subject in detail with a large number of slides and were often advertised alongside other serious minded sets (on subjects like geology and history), it is probable that such health slides were principally seen by middle class spectators or health professionals, rather than the wider public.

The lantern in public health education (PHE)

Having discussed the 'dubious candidates,' I now turn to some that I feel genuinely do fit the above criteria of the magic lantern for public health education at the end of the 19th and start of the 20th centuries.

As mentioned above, it turns out that Japan was already active in this area from around 1890, and I have seen slides representing metaphoric battles against infection diseases from that period.[12] There are also indications of initiatives in France, where, from the mid-1890s, a great national effort among organisations of popular education promoted educational lectures, with accompanying *projections lumineuses*, for the public and in schools.[13] Health education doesn't seem initially to have been a priority.[14] However, there was some activity of this kind that definitely used the lantern: for example, in the early years of the 20th century a certain M. Cornély was said to be lecturing about tuberculosus using a set of 25 slides.[15]

United States

I have found more evidence of the lantern for PHE in the United States than in France, and a pioneering region was New York. In 1887 Dr. Greene gave several free lantern lectures on health at the Brooklyn Atheneum, though these seem largely to have been to gain customers for his medical practice. Then a couple of years later, also in Brooklyn, Dr. A. N. Bell (Fig. 2) began a series of free lectures about "the promotion of health," though it was not stated if slides were shown.[16]

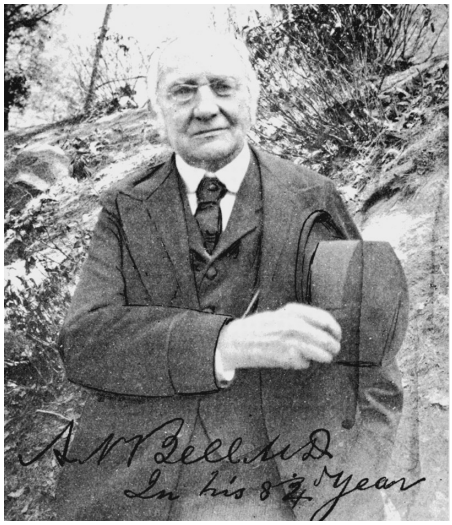


Fig. 2. Dr. A. N. Bell, age 84. *Popular Science Monthly*, July 1904.

At about the same time, just across the Brooklyn Bridge in New York City (until 1898 a separate city from Brooklyn), similar initiatives started happening. The *Evening World* newspaper sponsored a series of lantern lectures aimed at ordinary people, and one of the subjects covered was health advice.[17] Such lectures, including about health, continued in the following years in the city, albeit sporadically: for example, the Department of Education put on a series of "free lectures to the people" from 1896. Many of these were "illustrated by stereopticon views" and included several lectures about "physiology and hygiene" such as about the care of the teeth and the eyes, and the menace of germs.[18]

Germs, specifically bacilli, were known to be the cause of a one of the most lethal diseases of the 19th century: tuberculosis. TB primarily affected the urban poor, though all classes were at risk of infection, and major efforts were made to control it. From 1894, New York City's Department of Health initiated a large anti-TB publicity campaign, using newspapers, leaflets, and some lantern lectures. Then from the summer of 1906, the Department greatly expanded the screen part of the program by taking it out into the open and putting on free lantern exhibitions about the dangers of TB in 23 of Manhattan's public parks.[19]

The first display was in Battery Park at the southern end of Manhattan, on the evening of Monday 30 July 1906; and it attracted many local working-class adults and children, as slides were projected on a specially-erected screen. First were shown images of the old style, disease-prone tenements, followed by pictures of new style, light airy ones, as well as medical images about the disease. After the Battery, the slides were to be shown on a schedule progressing north though all parks in the city on three evenings a week until October. To keep up public interest, amusing extras such as moving pictures were to be interspersed.[20]

The summer of screenings attracted large audiences, and the programme continued in subsequent years. To ensure full understanding, text slides were adapted to the local communities, being in English, Yiddish and Italian.[21] The exhibitions dealt with both the prevention and cure of pulmonary TB, the main advice being about the importance of letting fresh air and sunlight into homes (even though that would have been difficult for dwellers in some of the poorest tenements).

By that time the city was a world leader in lantern health propaganda, and from 1910 also pioneered in public health on the cinema screen by commissioning and screening a film on the danger of fly-spread infection.[22] This and other PHE films were, like the slides, shown in public spaces in New York, and other American cities followed.

Great Britain

In Britain, lantern PHE also began on a small scale. One of the first such efforts was by George Cunningham (Fig. 3), a Cambridge-based dentist, sometimes called "the father of preventative dentistry." In 1891 Cunningham announced that he was using lantern slides to communicate a message of dental hygiene, and noted that this was a very effective, graphic method:

> Prevention is better than cure... Popular lectures, as free from technicalities as possible, profusely illustrated by means of the optical lantern, are valuable means towards this end. Experience has shown that large audiences of even the poorest classes are capable of appreciating such lectures. Illustrations with the lantern enable an audience ignorant of physiology to understand the subject matter intelligently without burdening the memory with the technical names necessarily employed in the description of physiological and pathological processes.[23]

Fig. 3. Plaque marking the house where Dr. George Cunningham practiced dentistry in Cambridge, England. Wikimedia.

I have found few further details about Cunningham's lantern PHE work, though he later pioneered the use of film in dental health campaigning (from around 1912), which I will describe in a future publication. Altogether, he is a pivotal figure in the history of screen health education.

In the same year that Cunningham reported his lantern campaign, an initiative by British food charities was under way to provide proper meals for poor children in east London, and, *The Times* re-

ported, this effort also included a wider educational component, by "organizing entertainments, lantern lectures, and cookery demonstrations, at which short practical addresses are given explaining the advantages of wholesome foods and the principles of hygiene."[24] I can find no further details of this scheme. However, soon afterwards another lantern PHE project began, about which we have much more information.

This was a series of health lectures, many of them with lantern projection, initiated in 1892 under the auspices of the Birmingham Athletic Institute (BAI), a philanthropic body devoted to encouraging healthy exercise and recreation.[25] The aim of these free lectures, according to the Institute's president, Henry Mitchell, was that "every member of the community, no matter how humbly circumstanced, should possess some knowledge of the main laws which govern the human frame." The one -hour lectures were delivered by medical doctors, but, "The lecturers are charged to treat the subjects in as popular a way as possible. Consequently technicalities are avoided and scientific instruction presented in the dress of plain easily-understood language with the attractive aid of diagrams and lantern slides."[26]

In the first year the Institute offered a mere six lectures, mainly about the importance of exercise, but the program expanded, so that by 1902 there were 24 well-attended lectures. In addition to exercise, these presentations were on subjects such as food and digestion, the prevention of TB, baby care, sight and hearing, the treatment of minor injuries, as well as on subjects coyly described as "To Women Only" and "To Men Only." During its first decade the lectures were attended by 100,000 people, it was claimed. Still, Mitchell realized that this was a small effort as yet lacking in the rest of Britain, and he wrote to the lantern journal to state as much. His words have some prescience, given the future development of national health services:

> The Health Lectures I have above alluded to reach but a comparative few, and extend over a limited area; they are merely an enlightening drop in the vast lake of hygienic ignorance, but [that] very ignorance is an object lesson pointing to a State-neglected duty. The subject is altogether too gigantic for private enterprise or individual philanthropy to grapple with any degree of effectiveness. It is to the State that the popular mind should turn, demanding a diffusion of knowledge which will enable the strong man and woman to keep healthy, to the greater benefit of the individual and the greater safety of the majority. This ignorance deprives thousands annually of that physical energy upon which the commercial and moral standards of the nation materially depend.[27]

There is much idealism in these words, but also much pragmatism. The letter was written within a few months of the end of the Boer War, a time when, as mentioned above, the bad health of recruits was seen to have had a deleterious effect on the military effort. Britain needed better public health to make the public fit to fight. I would make a more general point here, in suggesting that public health education, by lantern or other means, was introduced largely when it was seen to be required to benefit economic or national aims. Realization of this requirement dawned in the years leading up to and beyond the First World War, and the projector took its place as a vital tool to inculcate and promulgate the message. From that time onward, more and more instances may be found of lantern slides and/or films being used in health advice campaigns. Public health had taken its place on the screen.

Notes and References

1. Allen Johnson, *The Historian and Historical Evidence* (New York: Charles Scribner's Sons, 1926). In this context, 'hypothesis' is defined as a proposed explanation made on the basis of limited evidence, as a guide for further investigation.

2. Around half of the recruits in Britain were found to be unfit for military service in the Boer War due to poverty-related illnesses, which caused such concern that a Committee on Physical Deterioration was set up in 1903. In the USA the figure was about 30% unfit for service for WW1. See Thomas Jordan *The Degeneracy Crisis and Victorian Youth* (Albany: SUNY Press, 1993) 16, 93, 237-8; Richard K. Means, *A History of Health Education in the United States* (Philadelphia: Lea & Febiger, 1962), 112-13.

3. I discussed the WIHA in my presentation to the British Silent Film Festival Symposium, April 2017. Interestingly, the cinema, like the lantern, was late in being employed to promote health education, given that it had seen so many other uses from as far back as the 1890s, among which were advertising, industrial and medical demonstration, natural history, travelogues, news and war reporting, political and religious propaganda.

4. David Robinson, Stephen Herbert and Richard Crangle, eds., *The Encyclopaedia of the Magic Lantern* (London: Magic Lantern Society, 2001), 149.

5. "Biological Society," *National Republican* (Washington, DC), 21 May 1881, image 4. From "Chronicling America" website. [Editor's note: Brigadier General George Miller Sternberg (1838-1915) was a U.S. Army physician who is considered the first U.S. bacteriologist. He was Army Surgeon General from 1893 to 1902 (Wikipedia).]

6. "The Water We Drink," *Evening Star* (Washington, DC), 12 May 1893, 9. From "Chronicling America" website.

7. Some unpublished research about the Band of Hope, mentioned at the Utrecht conference, might modify this statement.

8. "Péril vénérien dans la classe ouvriere," *Bulletin mensuel: Société française de prophylaxie sanitaire et morale*, 10 October 1903, 423-452. From Gallica website. A report on this scheme (by an American expert who was in France in the summer of 1905) noted its importance, given a very high rate of VD in the Paris population and in the French military and among prostitutes. He noted that "lists of magic-lantern slides for use in lectures" were distributed, as well as pamphlets of advice etc. See "Report on the work accomplished by

the French Society of Social and Moral Prophylaxis" by E. L. Keyes, in *Transactions of the American Society of Sanitary and Moral Prophylaxis. vol 1*, meeting of 12 October, 1905, 80-82. From HathiTrust website. Dr. Keyes noted that "lectures [were] given to the 44th Regiment, to the 2d Battalion, lectures to sailors, lectures to the upper classes of schools, to religious and charitable societies, even to the public". He stated that the French society was founded in 1901 (before its U. S. cousin), and its purposes included providing a forum "for frank and free discussion of all questions relating to venereal diseases and sexual morality." Incidentally, there were lantern shows on diverse themes to the British armed forces from the 1860s, and probably there were similar developments among the militaries of other great powers.

9. "The famous Quakeress," *Illustrated Sydney News*, 22 July 1893, p. 7. Information from Joe Kember. [Editor's note: For more on Dr. Anna Longshore-Potts, see: Kentwood D. Wells. 2018. "As good as an hour with Mark Twain": the medical lectures of Anna M. Longshore-Potts. *The Magic Lantern* no. 16 (September 2018:5-7.]

10. Also listed on page 243 of the E.G. Wood catalogue mentioned above.

11. Newton advertisement in *Optical Magic Lantern Journal* (OMLJ) March 1895.

12. Information from Roland Domenig and other participants at the Utrecht conference.

13. The *Musée pédagogique* was central to these educational endeavours.

14. The agreed list of subjects, it seems, didn't include hygiene. See Galupeau essay in Anne Quillien (ed.), *Lumineuses Projections! La Projection Fixe Éducative* (Rouen: Réseau Canopé, 2016). In one district of Aisne in the 1890s, many of the lectures (including some on hygiene) were not accompanied with lantern slides. See Rozinoer, 7, in https://www.reseau-canope.fr/notice/lumineuses-projections.html.

15. See "Péril vénérien", 10 October 1903, 450.

16. Dr Greene: *Brooklyn Daily Eagle* 12 Dec 1887, p. 2; Bell lectured at the Brooklyn Institute: ibid., 4 November 1889, 1. Information from Artemis Willis. [Editor's note: For more on Dr. Alonzo Greene, see: Kentwood D. Wells. 2018. Dr. Greene's Grand Free Illustrated Lectures. *The Magic Lantern Gazette* 30 (2):17-19. Dr. A. N. Bell was a prominent Brooklyn physician who often lectured to medical societies and other groups on infectious disease. He was the editor of the medical periodical *The Sanitarian*. See: https://en.wikisource.org/wiki/Popular_Science_Monthly/Volume_65/July_1904/The_Progress_of_Science.] A search of HathiTrust on public health (subject) AND stereopticon (full text) results in over 30 hits for the 1880s, but many of these are reports of lantern-illustrated lectures to sanitary experts.

17. "The 'Evening world' lectures," *Evening World* (NY), 26 July 1888, 1, col.5.

18. See *Bulletin of free lectures to the people* (NY, 1896-97 and 1897-98): from HathiTrust website. See also, "Public lecture courses," *New-York Tribune*, 26 August 1905, 7: the subjects of these free, well-attended lectures included hygiene.

19. Marina Dahlquist, "Health Entrepreneurs: American Screen Practices in the 1910s," in Ludwig Vogl-Bienek and Richard Crangle (ed.), *Screen Culture and the Social Question, 1880-1914* (New Barnet, UK: John Libbey Publishing, 2013), 141.

20. "Vaudeville methods to teach the masses how to deal with consumption," *New York Times*, 5 August 1906, p.SM6.

21.Dahlquist, 142-3.

22. The film was made by Percy Smith for the Urban company in London. See Bill Marsh, "Visual Education in the United States and the 'Fly Pest' Campaign of 1910," *Historical Journal of Film, Radio and Television* vol. 30, no. 1 (March 2010):21-36.

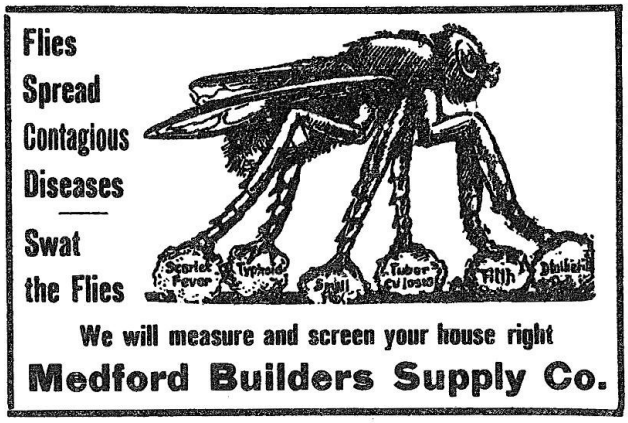
23. Seventh International Congress of Hygiene and Demography, August 1891, "Abstracts of papers," 208. From HathiTrust website.

24."Halfpenny Dinners For Schools," *The Times*, 9 November 1891, 11.

25. Richard Cox, et al, *Encyclopedia of British Sport* (Oxford: ABC-Clio, 2000), 35.

26. "Birmingham Athletic Institute. Health Lecture Scheme," OMLJ July 1903, 105-107. The lectures, Mitchell stated, were meant to be: "the laws of hygiene for the people, brought down to the comprehension of the man and woman in the street." (I have corrected minor misprints in these sources).

27. Letter from H.M (i.e. Henry Mitchell), headed "Health Lectures," OMLJ October 1902, 12-13. See also page 2 of the same issue of OMLJ, which notes that this project was among "the poorer classes of the community." Information from Frank Kessler.



Advertisement related to the fly pest campaign of 1910 (see note 22). *Medford* [Oregon] *Mail Tribune*, July 25, 1911. http://truwe.sohs.org/files/flies.html

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Illustrated Medical Lectures in the United States 1845-1915

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In the previous article, Stephen Bottomore discusses the origins of public health education using the magic lantern. He argues that use of lantern slides for this purpose was a relatively late development compared to other reform efforts such as the temperance movement. For several years, I have been compiling a database on the use of the magic lantern for lectures on science in the United States, and one category in my database is "medicine/health." It therefore seemed appropriate to write a companion article to compare my findings with his. It happens that I have relied mainly on two newspaper databases different from those used by Bottomore: *America's Historical Newspapers* and *NewspaperArchive.com*.

I focus here on illustrated medical lectures open to the public, even in cases in which the venue was a medical school or other professional setting. For much of the 19th century, such lectures were given mostly by local physicians or itinerant lecturers who may or may not have had formal training in medicine. Most lectures that turned up in my research dealt with specific organ systems, such as the reproductive system, the brain and nervous system, the eye, the respiratory system, the blood and circulatory system, muscles and bones, etc. Relatively few covered topics that we normally would consider issues of public health, such as sanitation, clean water, and the causes, transmission, and prevention of contagious diseases. With a few exceptions, these topics were discussed mostly in the late 19th and early 20th centuries, as Bottomore found in his research.

Medical Lectures in Antebellum America

Illustrated lectures on science were relatively rare in the decades before the Civil War and seem to have ceased altogether during the war years. By far the most common topic was astronomy, partly because of the widespread availability of Carpenter astronomy slides imported from London.[1] Illustrative material for other scientific topics, including health and medicine, were hard to obtain. Relatively few Americans had formal training in medicine, although that did not necessarily stop them from lecturing on the subject. My newspaper search turned up only a few medical lecturers in the antebellum period, although probably others were active in the field as well. Two were announced in the same issue of a Philadelphia newspaper in 1845, offering competing lectures in different venues. A third was lecturing in Massachusetts in 1856. All three focused at least in part on human reproduction, a controversial topic at the time.

Dr. Frederick Hollick (1818-1900) (the title "Dr." being self-bestowed) gave lectures on "The Origin of Life" in Philadelphia in the mid-1840s, with separate lectures for ladies and gentlemen (youths not admitted).[2] His lectures covered all aspects of human reproduction and diseases of the reproductive organs, illustrated with highly realistic papier-mâché mannequins and wax models of the human reproductive organs. As far as I can tell, he did not use magic lantern slides, which is not surprising given the difficulty of obtaining such images in 1845. His illustrative models were a bit too realistic for the authorities in Philadelphia, as were the color illustrations in his book derived from his lectures (and sold in the lecture hall). Perhaps even worse were the ideas advocated in his lecture, which included the notion that sex was a physiological necessity for all adults, regardless of marital status. He was twice charged with obscenity. Charges were dropped in his first trial after members of the audience refused to testify that his material was obscene. In fact, the Ladies Association of Philadelphia presented him with a medal for providing them with an all-too-rare frank discussion of human reproduction. He skipped out on his second trial and left for New York, where he continued his lecture career. His published sex manuals went through hundreds of printings throughout the 19th century.[3]

Competing with Hollick in Philadelphia was Dr. Wooster Beach (1794-1859) (Fig. 1), who lectured on medical botany, physiology, and human reproduction at Masonic Hall, again with separate lectures for ladies and gentlemen, with youths not admitted. His lectures were illustrated with "two figures" of the human reproductive system, wax models, and "illuminated paintings," which at this period could mean large paintings with front or rear illumination, or magic lantern slides.[4] Born in Connecticut, Beach graduated from medical school in New York and became a founder of

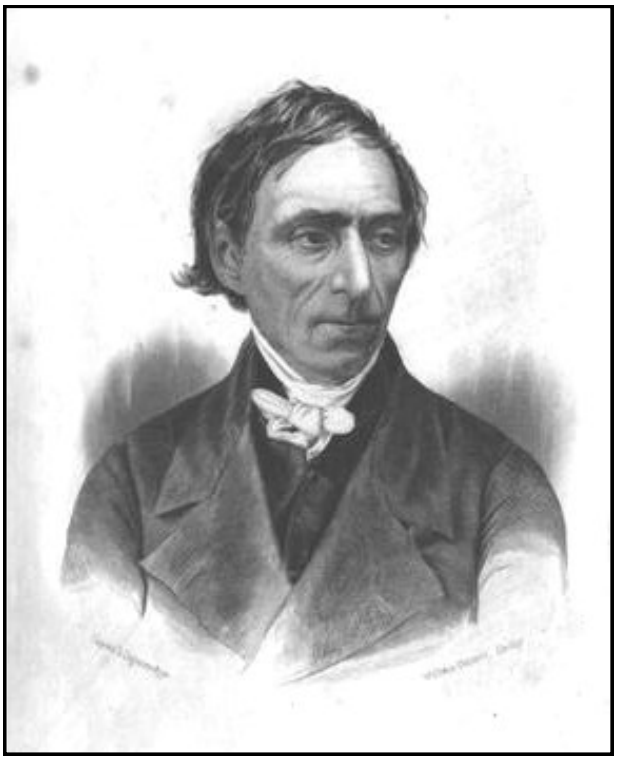


Fig. 1. Wooster Beach, M.D. (1794-1859).

the Eclectic school of medicine, which emphasized treatment with botanical remedies and opposed established medical practices such as blood-letting.[5] Beach published several books on Eclectic Medicine, which he sold in the lecture hall, along with his own patent medicines, including Dr. Beach's Restorative Wine Bitters, Worm Pills, Female Pills, Brown Ointment, Catarrh Powder, Rheumatic Liquid, and many others.[6]

In February 1856, itinerant lecturer Loring Moody gave a talk in Salem, Massachusetts on "The generative function of plants and animals, including the human species," illustrated with "a large number of carefully prepared diagrams, or Magic Lantern Pictures."[7] This does not seem to have been a regular lecture topic for Moody. He also lectured on topics such as "Spiritualism and its relations—Scientific, Theological, moral and social."[8] Before the Civil War, Moody was best known as a radical Boston abolitionist and prolific anti-slavery lecturer.[9] Later in life, he returned to his interest in biology. In response to the publication of Darwin's *Descent of Man* in 1871, Moody published is own book on the subject, with more religious overtones.[10] He eventually came to accept much of Darwinian evolution, and in the 1880s, became a supporter of the eugenics movement established by Charles Darwin's cousin, Francis Galton.[11]

Medical Lectures after the Civil War

After the Civil War years, medical lectures illustrated with the magic lantern or stereopticon became increasingly common, although still a small proportion of all lectures on scientific subjects. A number of lecturers took up the topic of sex education, including several women. Such lectures usually were disguised under titles such as "practical physiology," but the actual topic was revealed by language such as "for ladies only." For example, Mrs. Walter C. Lyman, who lectured in several cities, gave a "lecture to ladies on human anatomy and physiology," illustrated "by the aid of a stereopticon," at New York's Association Hall in 1874.[12] In 1878, Isaac Farrar, M.D. gave a course of illustrated lectures on health, including "moral hygiene" (for gentlemen only) and "practical physiology" (for ladies only) in Springfield, Massachusetts; he lectured on the same topics in Danbury, Connecticut in 1880.[13]

A few lecturers on sex education achieved national and even international recognition. Perhaps the most prominent was Dr. Anna M. Longshore-Potts (Fig. 2). One of the first American women to graduate from medical school, Dr. Longshore-Potts was better known as a popular lecturer than a medical practitioner. She not only toured the United States with a stereopticon, but several other English-speaking countries as well, including Canada, Great Britain, New Zealand, and Australia. Her focus was women's health, including reproduction, and educating women about their own bodies. Her lectures in the 1880s and 1890s were immensely popular, with medical lantern slides interspersed with slides of travel and scenery and other entertaining views. On some of her American lecture tours, as well as her two foreign trips, she was accompanied by another American physician and lecturer, Dr. J. Charles Harrison, who took over the "for gentlemen only" lectures. He was famous for including stereopticon slides of his European travels and even comic slides in his medical lectures.[14]

Fig. 2. Itinerant medical lecturer Dr. Anna M. Longshore-Potts in the 1890s.

Other medical lecturers from the 1870s through the 1890s often focused on the functions and diseases of particular organ systems, with lectures on the brain, the eye, and other parts of the nervous system being especially common. In some cases, free lectures were offered as an inducement for audience members to seek treatment from the lecturer or purchase their patent medicines or medical devices. The most widely advertised were free lectures on the nervous system given by Dr. Alonzo Greene (Fig. 3), who used them as a vehicle to sell his patent medicine cure-all called Nervura, which made him rich. Large display ads for Dr. Greene's lectures appeared in newspapers all over the country, promising the most beautiful dissolving views ever shown. These included not only medical illustrations, but also entertaining slides such as Arctic exploration, Mt. Vesuvius, astronomy, and other subjects, projected by "the finest imported stereopticon." Dr. Greene also offered the usual "private lectures" for ladies or gentlemen only.[15]

Fig. 3. Dr. J. Alonzo Greene

Another itinerant physician-lecturer was Arthur O'Leary (1829-1905) (Fig. 4), generally referred to in lecture announcements as "Dr. A. O'Leary." He began his career as a lecturer on phrenology, a pseudoscientific study of the head and brain popular in the 1850s. Meanwhile, his wife Helen received a medical degree from the Female Medical College of Pennsylvania, the same school from which Anna Longshore-Potts graduated, and established her own medical practice in upstate New York. Arthur received a degree in allopathic medicine from Jefferson Medical College in Philadelphia in 1866. By 1869, O'Leary and his family were living in the Midwest and he began giving illustrated medical lectures in states such as West Virginia, Ohio, and Indiana, mostly on human anatomy and physiology. At least once he ventured as far as New York's Cooper Institute to lecture on Physiognomy, another pseudoscientific field that attempted to deduce a person's character from features of the face. In addition to projecting lantern slides with a sciopticon, O'Leary was known for the large assortment of props used in his lectures, such as papier-mâché mannequins; models; human and animal skulls and skeletons, including a gorilla; and anatomical dissections.[16]

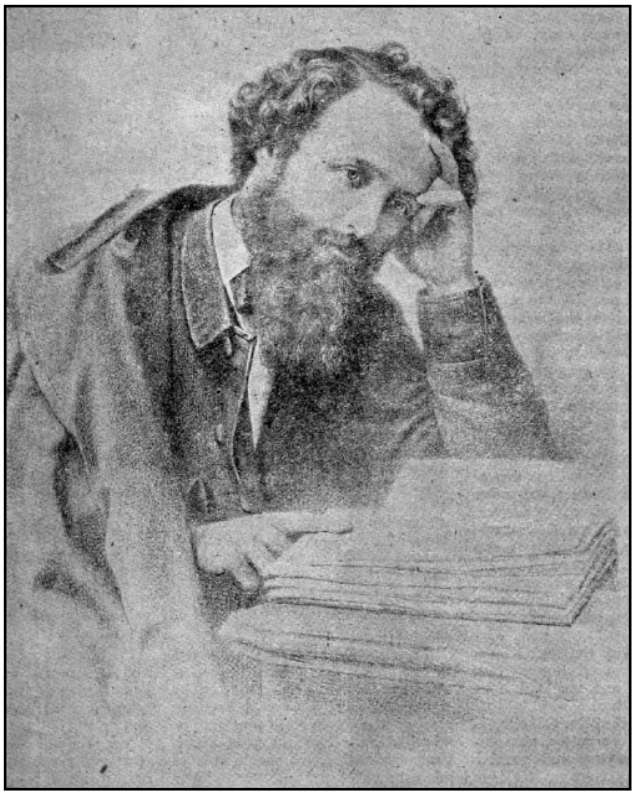


Fig. 4. Dr. Arthur O'Leary.

While some itinerant lecturers enjoyed nationwide success, many medical lectures were given by local men to local audiences, either for profit or as a public service. Most such lectures were given by professionally trained physicians and even medical school professors. For example, in the 1870s, Dr. Cornelius Comegys (Fig. 5), a prominent physician in Cincinnati, Ohio, lectured to local audiences on the circulation of the blood and other medical topics, using a magic lantern for illustrations. On one occasion, he attempted to use a magic lantern to show blood circulating through the tail of a

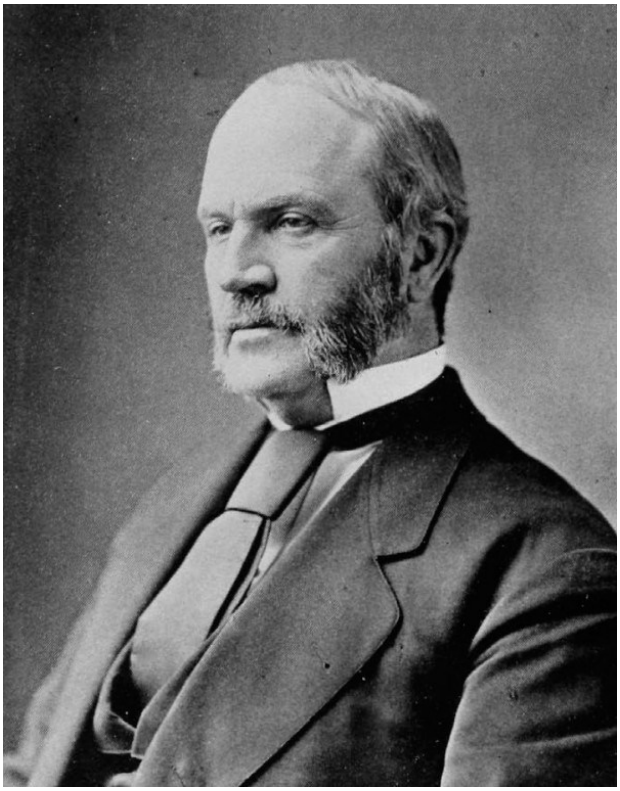


Fig. 5. Dr. Cornelius G. W. Comegys.

fish, but low gas pressure in the hall caused the experiment to fail.[17] In 1873, Boston ophthalmologist Dr. Benjamin Joy Jeffries (Fig. 6) lectured with a magic lantern on "Defects of Vision Affecting Artists."[18] Prof. Gerhard Saal of the Pulte Medical College in Cincinnati lectured on "The Causes of Epidemics" in 1875, a talk "beautifully illustrated with the magic lantern."[19] In March 1879, prominent New York physician J. W. Ranney gave a series of four public lectures at Chickering Hall on human anatomy and physiology, "accompanied by beautiful stereopticon illustrations."[20] In 1881, Dr. Daniel Roberts Brower spoke to the Chicago Philosophical Club on functions of the brain, with illustrations provided by an oxyhydrogen stereopticon.[21] New York neurologist H. W. Mitchell lectured on the brain at Cooper Union in 1882, using a stereopticon and a skeleton.[22] One of the University of Pennsylvania's pioneering bacteriologists, Prof. Henry Formad, lectured on the germ theory of disease in 1883, with illustrations projected "by a method similar to the magic lantern process."[23] Another Philadelphian, ophthalmologist S. D. Risley (Fig. 7) used a stereopticon to illustrate a lecture on "Our School Children's Eyes" at the Spring Garden Institute in 1884.[24] Other examples of public lectures by local medical experts, usually illustrated with a stereopticon, can be found throughout the 1880s and 1890s, but there is no need to list them all here.

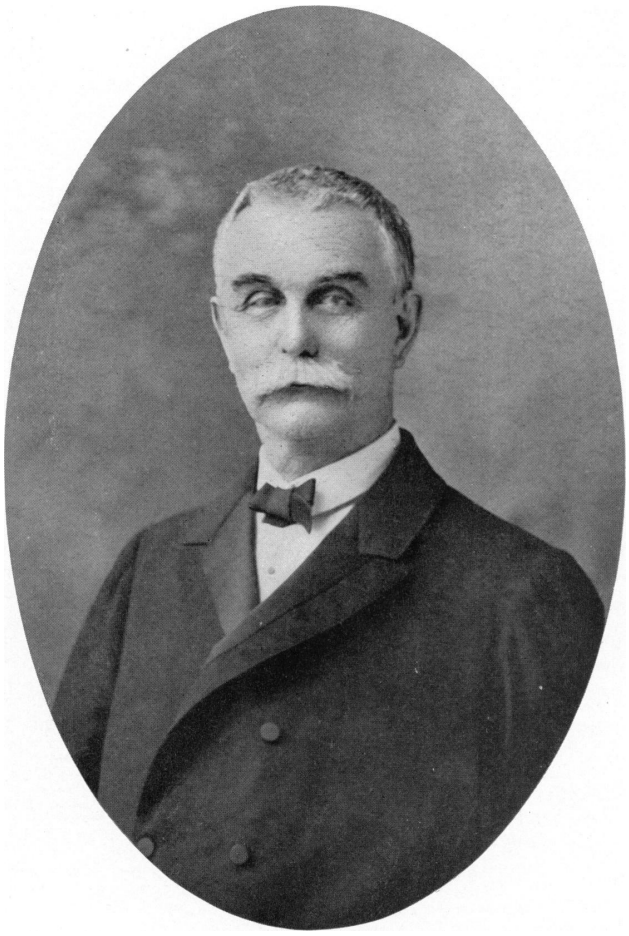


Fig. 6. Dr. Benjamin Joy Jeffries.

Fig. 7. Dr. S. D. Risley.

Conspicuously absent from this list are lectures relating to public health. An exception to this trend was a series of lectures given by Charles F. Chandler (Fig. 8), who was associated with the New York Municipal Board of Health from 1866 to 1883, and President of the Board from 1873 to 1883. Chandler was not a medical doctor, but rather a Columbia University chemist, who specialized in applied chemistry. In 1866, he was appointed official chemist to the Board, a position he held until being appointed President of the Board. Among his investigations were the gas nuisance, dangerous kerosene, the city water and milk supplies, adulterated liquors, poisonous cosmetics, the removal of unsanitary stalls around the city's food markets, the abatement of the sludge acid nuisance, the regulation of slaughter houses, the construction of tenement houses, the introduction of a proper system of plumbing and house drainage, and the care of contagious diseases in special hospitals.[25]

Fig. 8. Charles F. Chandler. National Library of Medicine

In addition to taking action on many of these problems, Chandler frequently gave illustrated lectures on public health issues to both general and professional audiences. In 1871, he gave a public lecture on "Water" at the Academy of Music, in which, "By the aid of a magic lantern the figures of animalculae found in the Croton [Reservoir] water were produced upon a screen and some of their peculiarities described."[26] In 1874, he contributed to Henry Morton's public lecture series at the Stevens Institute of Technology in Hoboken, New Jersey with a talk on "Fermentation and the Germ Theory of Disease," which was "brilliantly illustrated throughout by means of the magic lantern."[27] He discussed the "Sanitary Condition of the City" before a large and enthusiastic crowd at the College of Physicians and Surgeons in 1878, and he continued with this theme the following year at the YMCA with a talk on "Street Sanitation and Disease," illustrated by the magic lantern.[28]

In February 1879, Chandler took up the subject of New York's squalid tenement houses with a lecture on "Sanitary Reform and its Relation to our Tenement-house System" at Anthon Memorial Church, anticipating the later lectures of Jacob Riis. He lectured on the same topic at the Cooper Union in March.[29] In November of the same year, he lectured on "Public Health" at the New York Academy of Sciences, using a magic lantern to project plans for improved construction of tenement houses.[30] In 1880, he lectured at the Cooper Institute on "The Earth's Atmosphere: its Ingredients and its Influence on the Human Organism," with a number of "stereoptical pictures." In this lecture, he focused on the need for healthful, clean air and inveighed against fraudulent hucksters who peddled chemicals claimed to be disinfectants, declaring that "There is no such thing as a disinfectant."[31]

Chandler's foray into public health and social reform was relatively short lived. He was not reappointed as President of the Board of Health in 1883, mainly because he alienated people such as tenement landlords and food stall owners with what they perceived as heavy-handed tactics to clean up the city. After 1883, he seems to have abandoned his lectures on public health and turned his attention more toward industrial chemistry. He had wide ranging scientific interests, however, and continued public lantern lectures on a variety of topics. One of his passions was photography, and he gave illustrated lectures on the history and chemistry of photography from the 1870s to the 1890s.[32]

Lantern Slides and Public Health Education after 1900

I did not attempt to do a thorough search for individual examples of public health lectures illustrated with lantern slides after 1900, but I did find evidence that organized public health propaganda efforts ramped up in the early 20th century as part of a broader Progressive Era social reform movement. I will mention only two of these efforts here.

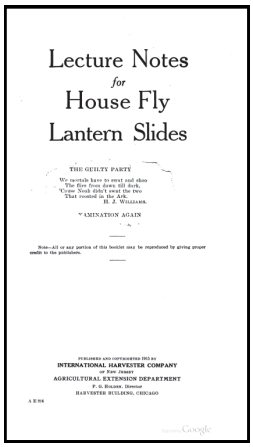
Around 1915, the U. S. Public Health Service established a Stereopticon Loan Library, using lantern slides originally intended for use by PHS officers for educational lectures. The demand for such lectures was so great that the PHS decided to lend slides to scientists, state and local health departments, and social workers throughout the country. By 1916, about 12,000 slides, with 3000 distinct views, were available for loans, and the library fielded some 372 requests for loans. Over 21,000 slides were loaned during the year. By 1917, nearly 550 requests were received and some 27,000 slides loaned. The numbers began to drop off in 1918, to 133 loans and 10,000 slides.

A 1916 article in *The Woman's Medical Journal* described the subjects covered by slide sets in the library: Alaska (83 views), showing diseases of Native Alaskans; Children and Children's Diseases (50 views); Health Exhibits (90 views), showing the PHS exhibit at the Panama-Pacific Exhibition of 1915, which had it own stereopticon library; Hookworm (90 views); Indians (50 views), showing lives and living conditions of Native Americans; Leprosy (45 views); Living Conditions (a small number of slides); Malaria (275 views); Milk (80 views), including sanitary conditions on dairy farms and milk-borne epidemics; Parasites and Organisms (200 views); Pellagra (60 views); Plague (500+ views); Rural Schools (10 views—incomplete); Service General (320 views) showing all the activities of the PHS (presumably used mainly by PHS lecturers); Smallpox (90 views); Trachoma (120 views, many colored); Tropical Diseases (100 views); Tuberculosus (100 views); Typhoid Fever (350 views). One can only imagine that most audiences would not want to sit through 500 slides on plague or 350 slides on typhoid fever. Presumably many lecturers selected only a portion of these large sets for their presentations. The staff of the Stereopticon Library also would make up custom sets of slides, depending on what subjects borrowers wished to cover. [33]

In the early years, demand for these slide sets always exceeded the supply. In 1916, the Surgeon General's report stated that many loan requests were refused due to lack of material. By the 1920s, the Stereopticon Loan Library had fallen on hard times. In 1923, only 81 requests for loans were received and only 6075 slides sent out, perhaps due to competition from motion pictures. Even with the reduced number of requests, the Surgeon General's reports throughout the 1920s contained nearly identical language complaining that "The work of the stereopticon library has been greatly hampered, owing to the shortage of slides and to the lack of funds for making new slides."[34] By 1928, loan requests were down to 41, with only 3950 slides sent out; the complaint about lack of funds was repeated.[35] By 1930, the library was on its last legs, with only 15 requests and 1800 slides sent out. Stereopticon slide loans continued through most of the 1930s, with requests in the low-to-mid 30s. The service apparently was discontinued by the end of the decade.[36]

One of the most notable public health propaganda efforts involved the battle against the common housefly. Starting around 1910, after the bacillus that causes typhoid fever was found on the bodies of houseflies, public health authorities, civic leaders, and ordinary citizens in the United States and Canada became obsessed with the notion that flies were major vectors for the spread of infectious diseases, including typhoid fever, tuberculosis, and even polio (they were not). This fear led to a widespread and coordinated effort to eliminate this dangerous pest, either by directly killing flies or eliminating breeding places such as manure piles, unsanitary outhouses, piles of garbage, and other filth. There was a sustained effort to encourage people to install window screens, no doubt to the considerable profit of screen manufacturers.[37] In Montreal, the local newspaper even sponsored a "Swat the Fly" contest, which awarded prizes to children who brought in buckets full of dead flies, killed by flyswatters that were distributed free to the children by local merchants. The potential risk of exposing young children to hundreds of supposedly infectious insects seems not to have occurred to the contest sponsors. Among the prizes awarded to boys were toy magic lanterns.[38]

These sorts of active measures to eliminate houseflies were bolstered by a widespread campaign of visual education about the dangers posed by houseflies. State and local boards of health, agricultural experiment stations, and other organizations flooded the market with inexpensive books and pamphlets on flies. Charles Urban produced a short educational film on "The Fly Pest," which was widely shown as part of the broader anti-fly campaign.[39] Lantern slide lectures also were widely used in the campaign. Sets of slides with titles such as "Swat the Fly" or "Trap the Fly" were produced, complete with lecture notes (Fig. 9).


Lecture Notes
for
House Fly
Lantern Slides

THE GUILTY PARTY

We mortals have to meet and shoo
The flies from dawn till dark,
'Cause Noah didn't swat the two
That vaulted in the Ark.
H. J. Williams.

"AMINATION AGAIN

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Fig. 9. Pamphlet providing lecture notes and images for a lantern slide lecture on the housefly. Google Books.

One stereopticon lecture produced by the International Harvester Company's Agricultural Extension Department included photographs and drawings of fly anatomy and how germs could be carried on the feet of flies (Fig. 10).

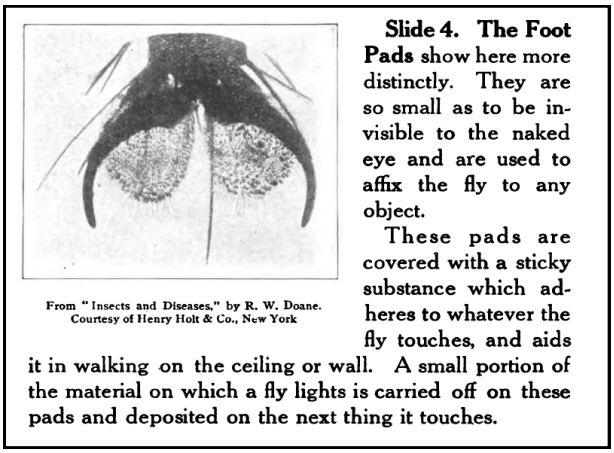
From "Insects and Diseases," by R. W. Doane.
Courtesy of Henry Holt & Co., New York
Slide 4. The Foot Pads show here more distinctly. They are so small as to be invisible to the naked eye and are used to affix the fly to any object.
These pads are covered with a sticky substance which adheres to whatever the fly touches, and aids it in walking on the ceiling or wall. A small portion of the material on which a fly lights is carried off on these pads and deposited on the next thing it touches.

Fig. 10. Illustration from lantern slide lecture notes, showing a slide of a fly's foot that can carry germs.

Babies were thought to be especially vulnerable, so slides showed scary images of giant flies invading baby food dishes (see front cover) or carrying away dead babies (Fig. 11).

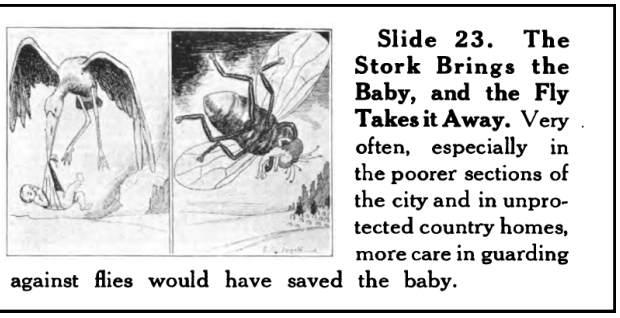
Slide 23. The Stork Brings the Baby, and the Fly Takes it Away. Very often, especially in the poorer sections of the city and in unprotected country homes, more care in guarding against flies would have saved the baby.

Fig. 11. Slide showing a fly taking away a baby.

Lectures often focused on unsanitary habits of certain classes of people (the poor), which in turn could encourage the breeding of flies and lead to infection of other people (the non-poor) (Fig. 12). The lecture also provided practical directions on methods for eliminating flies or excluding them from houses, including photographs of industrious boys building their own fly traps (Fig. 13). This sort of visual presentation in the service of public health has been interpreted as part of a thriving Visual Education Movement in the early decades of the 20th century.

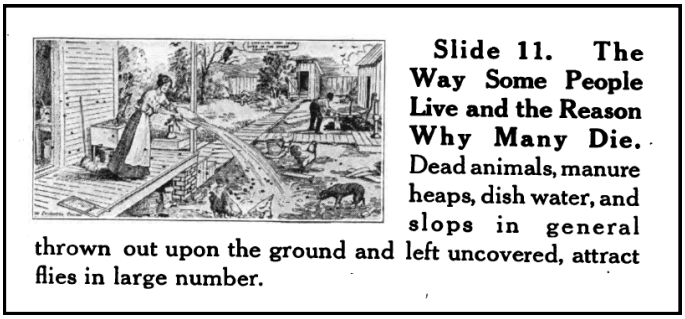
Slide 11. The Way Some People Live and the Reason Why Many Die. Dead animals, manure heaps, dish water, and slops in general thrown out upon the ground and left uncovered, attract flies in large number.

Fig. 12. Slide showing how filthy living conditions of the rural poor facilitate the breeding of flies.

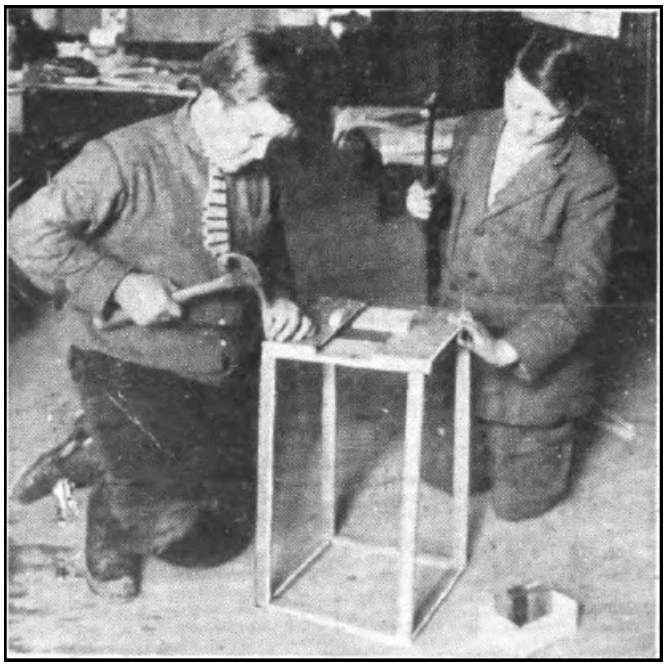

Fig. 13. Slide of industrious boys building their own fly trap.

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2. *Philadelphia Public Ledger*, December 6, 1845.

3. April Haynes. 2003. The trials of Frederick Hollick: obscenity, sex education, and medical democracy in the Antebellum United States. *Journal of the History of Sexuality* 12:543-574. Hollick was born into a working class family in Birmingham, England. His education came mostly from attending lectures at the local Mechanics Institute. He became a follower of Robert Owen's utopian socialism, as well as George Combe's phrenology, a pseudoscientific study of the brain. In the early 1840s, he and his wife departed for the United States. He

tried his hand at lecturing, choosing the unlikely topic of "scientific" support for slavery. These lectures were not very successful, so he soon switched gears completely and became an itinerant medical lecturer and sex educator, despite having no medical training. He presented himself as a doctor for the people, in contrast to established (and trained) physicians who charged high fees but kept their patients ignorant of their own bodies.

4. *Philadelphia Public Ledger*, December 6, 1845.

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6. "Dr. Beach's Restorative Wine Bitters," https://www.peachridgeglass.com/2014/12/dr-beachs-restorative-wine-bitters/.

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8. *Gloucester Telegraph*, September 2, 1859.

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11. Loring Moody. 1882. *Heredity in Relation to Human Development* (The Institute of Heredity, Boston). See also: https://collections.countway.harvard.edu/onview/exhibits/show/galtonschildren.

12. *New York Herald*, March 14, 1874, p. 2.

13. *Springfield Republican*, October 8, 1878. *Danbury Democrat*, August 28, 1880, in: Christopher Hoolihan. 2001. *An Annotated Catalog of the Edward C. Atwater, M.D. Collection of American Popular Medicine*, vol. 3, p. 240. Isaac Farrar (1830-1906) received his medical degree from the University of Vermont in 1862 and practiced in Hartford, Connecticut and Boston from the 1880s until his death. He was better known as a popular lecturer than a practitioner.

14. Kentwood D. Wells. 2018. "As good as an hour with Mark Twain": the medical lectures of Anna M Longshore-Potts. *The Magic Lantern*, no. 16 (September 2018), pp. 5-7.

15. Kentwood D. Wells. 2018. Dr. Greene's Grand Free Illustrated Lectures. *The Magic Lantern Gazette* 30 (2):17-19.

16. For biographical details on O'Leary, see: Margaret R. O'Leary and Dennis S. O'Leary. 2016. *The English Professor: Raphael Dorma O'Leary* (Google Books). Phrenology lectures: William Windsor. 1921. *Phrenology: The Science of Character* (The Ferris-Windsor Company, Big Rapids MI), p. 20. Medical lectures: *Fremont* (OH) *Weekly Journal*, September 10, 1869; *Fort Wayne* (IN) *Daily Gazette*, October 6, 1869; *Wheeling* (WV) *Register*, January 6 & 7, 1880. Physiognomy lecture: *New York Times*, February 9, 1871.

17. *Cincinnati Daily Gazette*, May 10, 1871. Cornelius Comegys (1816-1896) was born in Delaware, where his father was later Governor. He began his career as an unsuccessful businessman, but eventually attended medical school at the University of Pennsylvania. He later studied in medical schools in London and Paris. In Paris, he was exposed to the teaching of Jean-Martin Charcot, who used a magic lantern in his lectures (see: Jonathan Marshall. 2008. Dynamic medicine and theatrical form at the fin de siecle: a formal analysis of Dr. Jean-Martin Charcot's pedagogy, 1862-1893. *Modernism/modernity* 15:131-153). He established a practice in Cincinnati, where he helped to found a medical school. He was a great advocate for public lectures, and persuaded his medical colleagues and other educated men to join him in offering evening lectures on history, botany, biology, astronomy, medicine, and travel in local churches, the YMCA Hall, and the Chickering Institute, a local boys school (see: Charles George Comegys. 1899. *Cornelius George Comegys, M. D.* [published by the family, Cincinnati, Ohio]; Google Books).

18. *Cincinnati Daily Gazette*, April 25, 1873 (about lecture in Boston). Benjamin Joy Jeffries (1833-1915) was born in Boston and practiced medicine there after receiving a medical degree from Harvard in 1857. He was best known for his work on color blindness. See: Frederick E. Cheney, M.D. 1916. Dr. Benjamin Joy Jeffries (https://europepmc.org/backend/ptpmcrender.fcgi?accid=PMC1318056&blobtype=pdf).

19. *Cincinnati Daily Gazette*, February 23, 1875. Gerhard Saal (1822-1875) was born in Bavaria and received his medical training in German universities. He moved to the United States in 1847 and settled in Cincinnati, where he established a medical practice and taught in the Medical School. He served as an army surgeon in the Civil War and then returned to Cincinnati [*Cincinnati Medical Advance*, vol. 3 (1876), pp.239-242]. The year before his illustrated lecture on epidemics, he published a short article on "Origin of Cholera" [*Cincinnati Medical Advance*, vol. 1 (1874), pp. 156-158]. The same year, he gave a course of illustrated scientific lectures on Light, Heat, Electricity, Magnetism, and related subjects [*Cincinnati Medical Advance*, vol. 1 (1874), p. 64].

20. *New York Herald*, March 2, 1879, p. 7. *New York Times*, March 20, 1879. *New York Tribune*, March 25, 1879, p. 8. One of Dr. Ranney's lectures covered the antomy of walking in relation to athletic exercise, in which "he took occasion in the course of his lecture to inveigh very severely against the mania for walking," especially in young women; he believed rowing was better exercise than walking (*Scientific American*, March 22, 1879, p. 181).

21. *Daily Inter Ocean*, January 8, 1881, p. 8. Dr. Daniel Roberts Brower (1839-1909) was a leading Chicago physician specializing in mental health and diseases of the nervous system. He received his medical degree from Georgetown University in 1864 and entered the Union Army and was assigned to the general hospital at Fortress Monroe, Virginia, the largest hospital in the United States. For several years after the war, he was Superintendent of the Eastern Lunatic Asylum in Williamsburg, Virginia. In 1875, he established a medical practice in Chicago and was associated with several medical schools and organizations. He was considered an excellent lecturer, not only on medical subjects, but also anthropology, botany, and geology, and often spoke before non-professional audiences. See: "Death Claims Noted Nerve Specialist," *Daily Inter Ocean*, March 2, 1909, p. 12; F. M. Sperry. 1904. *A Group of Distinguished Physicians and Surgeons of Chicago* (J. H. Beers & Co., Chicago), pp. 99-103.

22. *New York Herald*, March 12, 1882, p. 17.

23. *Philadelphia Inquirer*, March 28, 1883, p. 3. Henry F. Formad (1847-1892) received his M.D. from the University of Pennsylvania in 1877 and joined a group of five pioneering bacteriologists at the university who specialized in bacteria that cause infectious diseases, inspired by the work of Robert Koch. See: James A. Poupard. 2010. *A History of Microbiology in Philadelphia 1880-2010* (Xlibris Corporation).

24. *Philadelphia Inquirer*, April 16, 1884, p. 2. Samuel Doty Risley (1845-1920) was born in Cincinnati, Ohio and received his M.D. from the University of Pennsylvania in 1870. He specialized on the eye, and by 1872, was chief of the university's eye clinic. He held many professional positions in Philadelphia and published more than 70 scientific and medical papers. See: G. Oram Ring. 1920. "Samuel Doty Risley, A.M., M.D., LL.D." *Transactions of the American Ophthalmological Society*, vol. XVIII, pp. 13-20.

25. Marston Taylor Bogert. 1931. *Biographical Memoir of Charles Frederick Chandler 1836-1925* (National Academy of Sciences, Washington DC), pp. 127-181.

26. *New York Tribune*, January 21, 1871.

27. *New York Times*, April 9, 1874, p. 2. For public lectures organized by Henry Morton at Stevens Institute of Technology, see: Kentwood D. Wells. 2018. Henry Morton: Prince of American lecturers on science. *The Magic Lantern Gazette* 30 (3-4):3-21.

28. *New York Times*, June 4, 1878, p. 5. *New York Tribune*, November 26, 1879.

29. *New York Times*, February 28, 1879; March 12, 1879, p. 2. For lantern lectures by Jacob Riis, see: Bonnie Yochelson and Daniel Czitrom. 2007. *Rediscovering Jacob Riis. Exposure Journalism and Photography in Turn-of-the-Century New York* (The New Press, New York). This book mentions Chandler's lantern slide lecture at a mass meeting on tenement reform at Cooper Union in March 1879 and gives him credit for being part of a visual turn in the social reform movement that culminated in Riis's work (pp. 44-45). However, I did not find any evidence that Chandler photographed residents of tenement houses, a hallmark of Riis's lantern slide lectures. See also: Bonnie Yochelson. 2014. The Jacob A. Riis Collection: photographs for books and lantern lectures, pp. 83-95. In: Ludwig Vogl-Bienek and Richard Crangle, eds. *Screen Culture and the Social Question 1880-1914* (John Libbey, New Barnet UK).

30. *New York Times*, November 26, 1879, p. 2.

31. *New York Times*, March 28, 1880, p. 2.

32. *New York Herald*, March 5, 1878; *New York Tribune*, January 21, 1894, p. 22.

33. *Annual Report of the Surgeon General of the Public Health Service of the United States* for the Fiscal Years 1916, 1917, 1918. "The Stereopticon Loan Library of the U. S. Public Health Service," *The Woman's Medical Journal*, vol. 26, no. 9 (September 1916), p. 225.

34. *Annual Report of the Surgeon General of the Public Health Service of the United States* for the Fiscal Year 1923.

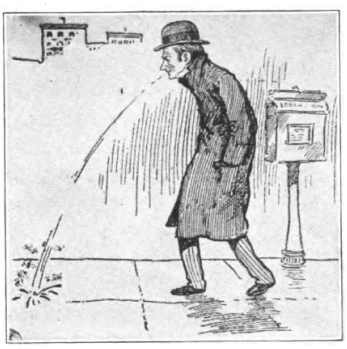
35. *Annual Report of the Surgeon General of the Public Health Service of the United States* for the Fiscal Year 1928.

36. *Annual Report of the Surgeon General of the Public Health Service of the United States* for the Fiscal Years 1930-1940 (Hathi Trust Digital Library https://catalog.hathitrust.org/Record/009702538).

37. Naomi Rogers. 1989. Germs with legs: flies, disease, and the new public health. *Bulletin of the History of Medicine* 63:599-617; Vincent J. Cirillo. 2006. "Winged sponges": houseflies as carriers of typhoid fever in 19th and early 20th-century military camps. *Perspectives in Biology and Medicine* 49:52-63; Vincent J. Cirillo. 2016. "I am the baby killer!" House flies and the spread of polio. *American Entomologist* 62:83-85.

38. Valerie Minnett and Mary-Anne Poutanen. 2007. Swatting flies for health: children and tuberculosis in early twentieth-century Montreal. *Urban History Review* 36:32-44. Toy magic lanterns were generally considered "toys for boys," and were sold mostly around Christmas. Leftover lanterns often were given away as contest prizes or premiums to encourage the purchase of boy's clothing and other items. See: Kentwood D. Wells. 2010. Magic lanterns: Christmas toys for boys. *The Magic Lantern Gazette* 22 (1):3-29.

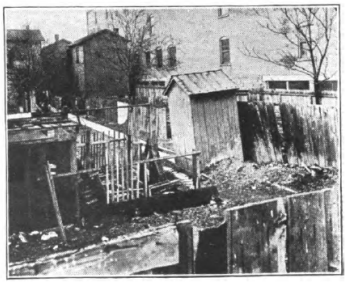
39. Bill Marsh. 2010. Visual education in the United States and the 'Fly Pest' campaign of 1910. *Historical Journal of Film, Radio and Television* 30:21-36.



Slide 14. Careless Habits that are Dangerous. The careless and filthy American habit of spitting in public furnishes another source of contagion.

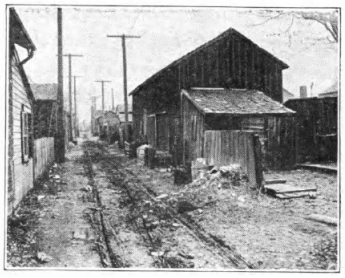
Flies may sip up the sputum of a person ill with consumption, and carry the disease from one person to another.

Bacteria have been known to live within the bodies of flies for three weeks or more, consequently the same fly may distribute germs many times and in many places without revisiting the source from which it first obtained its deadly supply.



Courtesy of National Cash Register

Slide 15. A Dirty Back Yard.



Slide 16. A Dirty Alley.

The Great Patent Medicine Craze in Lantern Slides

Dick Moore
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Guilford CT 06437
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A few years ago, having narrowed down my collecting to "all things magic lantern," I came across a slide set regarding patent medicines. The slides illustrated a lecture that graphically presented the history and dangers of patent medicines, revealing the previously unknown ingredients of these supposed "cure alls." The intended audiences, as well as the date of the presentation are unknown. Based on a few dates on death certificates and advertisements seen in some slides, the set probably dates from around 1910 or shortly thereafter. That puts it in the same time period as public health propaganda slides discussed in the previous two articles. Unfortunately, the slides did not come with a lecture text, so we can only speculate about the contents of the talk.

Patent medicines have their origins in ancient remedies that were handed down over the centuries. Even in the 19th century, very little was known about human physiology or the causes of diseases and their treatments. Doctors had limited knowledge and were expensive, while hospitals were places people went to die. It's no wonder that people sought solutions to problems they did not understand and feared. Many elixirs had their beginning in the "potions" of Medicine Men, Witch Doctors, and Tribal Healers. Since routine health care was provided by the mothers of the family, elixirs also evolved from the home remedies (many with botanical ingredients) of housewives and grandmothers,. Through the sharing and demand for their remedies by friends, relatives, and neighbors, in many instances the spirit of entrepreneurship and profitability took hold, often leading to family businesses for the production and public sale of these remedies, such as Lorman's Indian Oil, Andrew's Liver Salts, and Lydia Pinkham's Vegetable Compound.

These compounds were known as *Nostrum Remedium* (our remedy) and still are referred to as Nostrums. Over the centuries other names have included "Quack Medicines" and "Snake Oils." The phrase "patent medicine" comes from the late 17th century marketing of medical elixirs, when those who found favor with royalty were issued *Letters Patent* or *Patents of Royal Favour*, authorizing the use of the royal endorsement in advertising. Few of the nostrums were actually patented, for that would have meant disclosing the ingredients. Chemical patents only came into use in the United States in 1925.

The Patent Medicine Business in the United States

The manufacture and sale of patent medicines became a highly profitable business in 19th century America, particularly after the Civil War. These nostrums were said to cure almost any ailment, from the merely annoying (headaches, toothaches, complexion problems, baldness, fatness, thinness) (Fig. 1) to more lethal diseases (tuberculosis, cancer) (Fig. 2). Often the same medicine was claimed to cure a whole range of unrelated maladies. The growth of the patent medicine industry in post-Civil War America paralleled the explosive growth of newspaper and magazines, which in turn facilitated advertising of patent medicines with eye-catching graphics and exaggerated claims about their benefits. Many of the slides in this set are photographs of newspaper ads (Fig. 3).

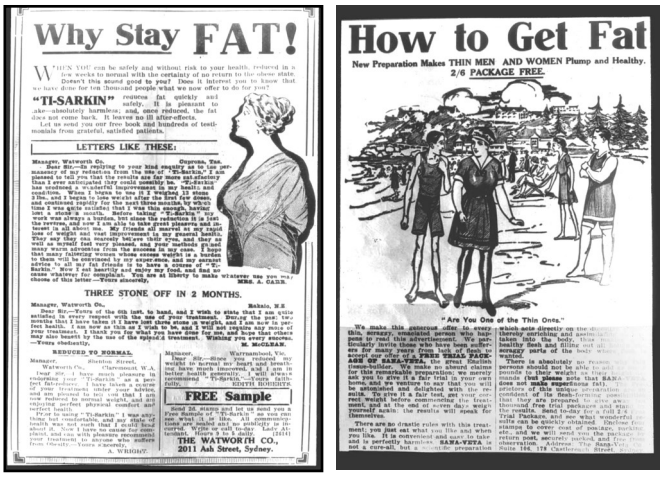

Why Stay FAT!
"TI-SARKIN"
LETTERS LIKE THESE:
THREE STONE OFF IN 2 MONTHS.
REDUCED TO NORMAL.
FREE Sample
THE WATWORTH CO.,
2011 Ash Street, Sydney.
How to Get Fat
New Preparation Makes THIN MEN AND WOMEN Plump and Healthy.
2/6 PACKAGE FREE.
"Are You One of the Thin Ones."

Fig. 1. Two slides showing ads for medicines to cure fatness and thinness.

STOP!
DON'T LET
CONSUMPTION
TAKE YOU TO
YOUR GRAVE
You have to go sometime but you do not have to go that way; because
LUNG-VITA CONQUERS CONSUMPTION
Strong words those but they mean just what they say. LUNG-VITA is a specific remedy for Consumption, Asthma, weak lungs, or any other throat or lung trouble. It has never failed on a case of Consumption when taken in time, and has restored a number of cases that had been given up as hopeless by the physicians in charge. If that sounds too good to be true, write to Nashville Medicine Co., 114 Steiger Bldg., Nashville, Tenn., giving name of your druggist, and you will receive in next mail positive proof that LUNG-VITA does overcome those dangerous diseases of the throat and lungs. If you have any of these troubles, don't wait until it is too late. Begin the treatment today. It's worth a special trip to your druggist.
LUNG-VITA IS SOLD AND RECOMMENDED BY ALL DRUGGISTS
Atlanta Jobbers: John B. Daniel and Lamar & Rankin Drug Co.

Fig. 2. Slide of advertisement for Lung-Vita, purported to cure tuberculosis, which it did not.

Fig. 3. Slide showing a selection of newspaper ads for a patent medicine called Plant Juice.

Claimed Curative Effects of Patent Medicines

Many of the slides in this set depict advertisements for patent medicines making all sorts of exaggerated claims about their curative effects. For example, "Mayr's Wonderful Stomach Remedy" and "Fruitola" the System Cleanser are two nostrums of the "Gallstone Cure" type, plus, being the cure for quite a few other ailments, including stomach and liver trouble, Gastritis, Indigestion, Dyspepsia, Pressure of Gas around the heart, sour stomach and distress after eating, Nervousness, Dizziness, Fainting Spells, Constipation, Yellow Jaundice, and Sick Headache (Fig. 4). The actual ingredients of Fruitola were merely olive oil and Seidlitz Powders, which were effervescing sodium bicarbonate and Rachelle salts with tartaric acid–a mild cathartic–known for similar effect to the waters of Seidlitz, a village in Bohemia. What effect do these ingredients have on the human body? Well, anyone who takes a large dose of bland oil and follows it up with "salts" will pass soapy concretions. One lady actually thought these were her gall stones. We will skip the slide of her concretions (which was in the collection of slides).

Fig. 4. Slide showing two ads for patent medicines to treat gall stones and other digestive ailments.

An ad shown in another slide promised: "If you suffer from fits or falling down and nervous spells, let us send you a liberal trial treatment of our wonderful Brain and Nerve restorers." Furthermore, "Hundreds received marked permanent relief from the free trial treatment alone. And, we want to prove the wonderful efficiency to every sufferer. No matter how serious your case or who has failed to cure you there is hope for you with this treatment." The same slide shows an ad promising a cure for goiters [an enlargement of the thyroid gland mainly caused by a lack of iodine in the diet]: "Don't suffer and be disfigured with a big neck. Don't give up hope because other physicians or remedies have failed. I am curing hundreds...." (Fig. 5).

Useless and Dangerous Patent Medicine Ingredients

The actual ingredients of patent medicines often were ineffective or downright dangerous, and much of this slide lecture was devoted to exposing these dangers. Sadly, many of these concoctions containing morphine, opium, cocaine and alcohol at levels of 16%

FITS
RIGHT REMEDY IS FOUND AT LAST
LET US PROVE IT
2.50 WORTH FREE
LET ME REMOVE YOUR
GOITRE
$2.50 TEST Treatment FREE
$2.50 TREATMENT FREE
Beautifying Articles Free
A reproduction (reduced) of an advertisement of the Peebles Institute. Its treasurer and general manager, W. T. Bobo, also advertises a "goiter cure."
A typical advertisement (reduced) of Bobo in his rôle of goiter curer.

Fig. 5. Slide showing two ads from W. T. Bobo, said to cure fits and goiters.

upwards to even 50% were advertised for infants and children. You can imagine that a mother's attempts to relieve their child's colic could, and too often did, lead to tragic results.

There were many other deadly ingredients used in patent medicines without the public being notified of their presence. Some of the poisons that were used, unknown to the purchaser, included Strychnine, Arsenic, Prussic Acid, Aconite (type of sedative from the Monkshood tuber), Carbolic Acid, Phosphorus, Oxalic Acid (used for bleaching), Tartar Emetic (an agent that induces vomiting, and Mercuric Chloride, and Oil Tansy (Fig. 6). Interestingly, the word Tansy is a derivative from either the Greek word *thanatos* (death) or *athanatos* (immortality); your choice.

Fig 6. Slide showing various poisonous ingredients of patent medicines.

There was no limit to the ingredients used to make patent medicines, and in the early 1900s, purportedly radioactive medicines were introduced and marketed, including a medicine called Radol (Fig. 7). Dr. Rupert Wells was the assumed name of Dennis Dupuis, a quack who sold Radol as a cure for cancer. On the Radol label, Dr. Wells called his mixture "A Radium Impregnated Fluid" prepared under the supervision of Dr. Wells. "This fluid is not expected to retain its radioactivity beyond 40 days from the date of this label." The actual ingredients of Radol were quinine, alcohol, and acidulated water. It contained no more radium than dish water. The U.S. Government declared it a fraud. Unfortunately some other radioactive medicines like Radithir did include the inferred ingredients, leading to radium poisoning and even death for the user.

Radol
Dr. Rupert Wells
FOR EXTERNAL USE.
I Can Cure Cancer
Radol
Dr. Rupert Wells
FOR INTERNAL USE.
THIS BOTTLE CONTAINS
Radol
A RADIUM IMPREGNATED FLUID, PREPARED ACCORDING TO THE FORMULA AND UNDER THE SUPERVISION OF
Dr. Rupert Wells
ST. LOUIS, MO.
THIS FLUID IS NOT EXPECTED TO RETAIN ITS RADIO ACTIVITY BEYOND FORTY DAYS FROM DATE OF THIS LABEL.
FOR INTERNAL USE.
KEEP THIS BOTTLE IN A DARK COOL PLACE

Fig. 7. Two slides showing Dr. Wells's Radol, a supposedly radioactive cure-all. Fortunately for his patients, it was not radioactive.

In spite of the poisonous ingredients, the patent medicine curative claims continued unabated until the early 1900s, when muckraking journalists began publishing articles describing instances of death, drug addiction, and other hazards from the compounds. In 1905, Samuel Hopkins Adams published an exposé entitled 'The Great American Fraud' in *Collier's Weekly*. This led to Theodore Roosevelt signing The Pure Food and Drug Act of 1906 as part of the Progressive Era movement aimed at regulating businesses. It was the first of a series of significant consumer protection laws and led to the creation of the Food and Drug Administration.

The Act did not stop or prevent the sale of patent medicines, nor did it ban the use of the ingredients. Rather the law required that active ingredients be placed on the label of a drug's packaging and curbed some of the more misleading claims, and it required that drugs could not fall below purity lev-

els established by the *United States Pharmacopeia or the National Formulary*. In essence the Pure Food and Drug act required any "patent medicine" to declare the presence and amount of dangerous drugs and their derivatives. This led to some very interesting labeling changes, which in hindsight disclosed the many dangers of the patent medicines.

For example, before the Food and Drug Act, Dr. Pierce's "Smartweed" was a "cure" for many troubles, including Diarrhea, Dysentery, Bloody-Flux, Summer Complaint, Cholera Morbus, Cholera Infantum, Colic, Cramps and Pains in the Stomach, Febrile and Inflammatory Attacks, Rheumatism, and Neuralgia, and it relieved all pains that females are subject to from taking cold at a critical period. After the law became effective, the curative claims disappeared, it became a "relief" and it was disclosed that the nostrum contained opium and alcohol (Fig. 8).

DR. PIERCE'S
COMPOUND EXTRACT
OF
SMART-WEED
OR
WATER PEPPER
TAKEN INTERNALLY.
This Compound Extract of Smart-Weed cures Diarrhea, Dysentery, Bloody-flux, Summer Complaint, Cholera Morbus, Cholera Infantum, Colic, Cramps and Pain in Stomach; breaks up Colds, Cramps, Febrile and Inflammatory Attacks, Rheumatism and Neuralgia, and relieves all Pains and Suppressions to which Females are subject from taking cold at a critical period.
FULL DIRECTIONS
For taking this medicine in all the various diseases for which it is especially recommended will be found in the body of a pamphlet inclosing the bottle inside this wrapper.
MANUFACTURED ONLY BY
WORLD'S DISPENSARY MEDICAL ASSOCIATION,
BUFFALO, N.Y.
DR. PIERCE'S
COMPOUND EXTRACT
OF
SMART-WEED
OR
WATER PEPPER
THIS COMPOUND CONTAINS EIGHT-TENTHS OF ONE GRAIN OF OPIUM TO EACH FLUID OUNCE; ALSO 40 PER CENT. BY VOLUME OF ALCOHOL.
This medicine contains Extract of Smart Weed herb, Extract of Jamaica Ginger and a small amount of Gum Camphor.
The amount of Opium contained in a dose of this compound fabeni. one-tenth of a grain to the teaspoonful) is much less than is contained in a corresponding quantity of ordinary Paregoric.
This medicine is for the relief and cure of acute pains and sudden attacks of the diseases for which it is recommended. It is not intended to be taken for an extended period of time. It is an emergency medicine for sudden attacks of disease and could never be used as a beverage. It is the only one of Dr. Pierce's proprietary medicines which contains a drop of alcohol, and the small amount contained in a dose of this is valuable as a diffusive stimulant for temporary use.
FULL DIRECTIONS
For taking this medicine in all the various diseases for which it is especially recommended, will be found in the body of the pamphlet inclosing the bottle inside this wrapper.
Manufactured by WORLD'S DISPENSARY MEDICAL ASSOCIATION, Buffalo, N. Y.
AMA
AMERICAN MEDICAL ASSOCIATION

Fig. 8. Slide showing two labels for Dr. Pierce's Smart-Weed Extract from before and after the Pure Food and Drug Act of 1906.

In the old days Piso Nostrum was a "Cure for Consumption." Then it became merely a "remedy" for "coughs and colds," and the public learned that it contained chloroform and Indian Hemp (Fig. 9). Another example of label transformation is exhibited in the evolution of "PSychine" from an "Infallible Remedy" for consumption and all other disorders of the throat and lungs, to a "Wonderful Remedy," to a mere "Tonic Appetizer and Aid to Indigestion," containing 10 % alcohol (Fig. 10).

Fig. 9. Slide showing progressive reduction in claims for the curative powers of Piso's patent medicine.

GREATEST OF TONICS
PSYCHINE
TRADE MARK
An Infallible Remedy
For Consumption
and all Disorders of the
THROAT AND LUNGS
Restorative, Digestive, Invigorating, Sustaining, Continuously Nourishes, Fortifies, Refreshes and Strengthens the entire human organism.
SOLD BY ALL DRUGGISTS
Price, $3.00
If the firm you trade with do not have Psychine on hand, ask them to get it for you. It is their pleasure and duty to fill all orders for medicines asked for. Should a "substitute," sometimes called "our own make" or "just as good," be offered, refuse it and write us at once and receive what you want, direct from our Laboratory in New York City.
PREPARED ONLY BY
T.A. Slocum Co.
Manufacturing Chemists.
NEW YORK, U. S. A.
GREATEST OF TONICS
PSYCHINE
TRADE MARK
ALCOHOL 10 PER CENT.
Guaranteed by T. A. SLOCUM CO. under Food and Drugs Act, June 30, 1906.
GUARANTY No. 332
A Wonderful Remedy
For Consumption
And all other Disorders of the
THROAT AND LUNGS,
Restorative, Digestive, Invigorating, Sustaining, Continuously Nourishes, Fortifies, Refreshes and Strengthens the entire human organism.
Sold by all Druggists; Price, $3.00
If the firm you trade with do not have Psychine on hand, ask them to get it for you. It is their pleasure and duty to supply all medicines asked for. Should a "substitute," sometimes called "our own make" or "just as good," be offered, refuse it and write us at once and receive what you want, direct from our Laboratory in New York City.
PREPARED ONLY BY
T.A. Slocum Co.
Manufacturing Chemists.
NEW YORK, U. S. A.
STRENGTH GIVING TONIC
PSYCHINE
TRADE MARK
ALCOHOL 10 PER CENT.
Guaranteed by T. A. SLOCUM CO., under the National Pure Food and Drugs Act, June 30, 1906.
GUARANTY No. 332
A Tonic Appetizer and Aid to Digestion
Improves the Tone and Vigor of the Stomach and Bowels and thus increases the Powers of Digestion.
Sold by all Druggists; Price, $3.00
If the firm you trade with do not have Psychine on hand, ask them to get it for you. It is their pleasure and duty to supply all medicines asked for. Should a "substitute," sometimes called "our own make" or just as good," be offered, refuse it and write us at once and receive what you want, direct from our Laboratory in New York City.
PREPARED ONLY BY
T.A. Slocum Co.
Manufacturing Chemists.
NEW YORK, U. S. A.

Fig. 10. Slide showing progressive label changes in another patent medicine.

Advertising Strategies

The growth of the patent medicine industry would not have been possible without the rapid growth of printed advertising. Many of the slides in this set deal with various strategies to market these products to the public.

Testimonials—Testimonials from satisfied users became a very popular advertising technique. They were relatively easy to come by, particularly since, while the person was not cured, the ingredients of alcohol and opium did make the user "feel fine." Given the prevalence of theses addictive ingredients, it is not surprising that many products were enthusiastically endorsed by their users. Testimonial advertisement largely supplemented direct claims that were characteristic of patent medicines, with the 'lie of circumstance' instead of the 'lie direct.' Here are a few examples related to purported cures for consumption that show how they were both used and abused.

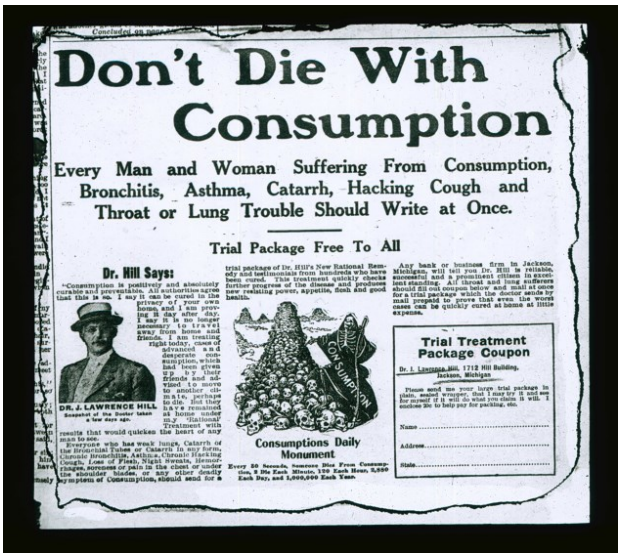

Don't Die With Consumption
Every Man and Woman Suffering From Consumption, Bronchitis, Asthma, Catarrh, Hacking Cough and Throat or Lung Trouble Should Write at Once.
Trial Package Free To All
Dr. Hill Says:
DR. J. LAWRENCE HILL
Consumptions Daily Monument
Trial Treatment Package Coupon
Name
Address
State

Fig. 11. Slide showing an advertisement for Dr. Hill's cure for consumption.

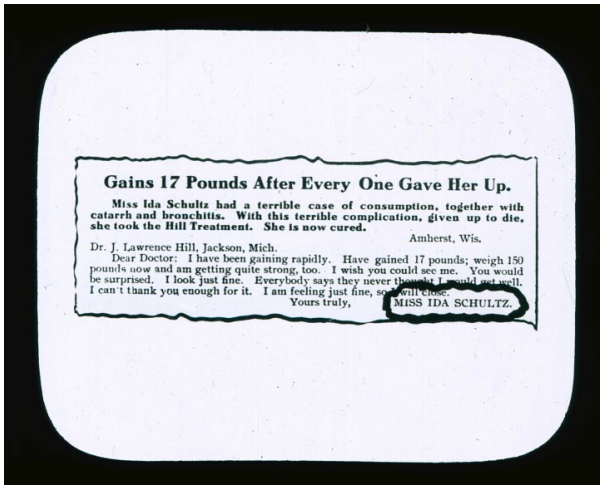
Dr. J. Lawrence Hill sold a worthless and vicious "Consumption Cure" on the mail-order plan (Fig. 11). "Every man and women suffering from consumption, bronchitis, Asthma, Catarrh, hacking cough and throat and lung problems should write at once." Hill claimed to have graduated from Edinburgh University, which of course was not true. Like all consumption cure fakes, Hill's "cure" success depended upon testimonials. Miss Schultz's testimonial follows:

"Gains 17 pounds after everyone gave her up."

"Miss Ida Schultz had a terrible case of consumption, together with Catarrh and Bronchitis. With this terrible complication, given up to die, she took the Hill treatment. She is now cured."

"Dear Doctor I have been gaining rapidly. Have gained 17 pounds. Weigh 150 pounds now, and getting quite strong too. I wish you could see me. You would be quite surprised. I look just fine. Everyone say they never thought I would get well. I can't thank you enough for it. I am feeling just fine so I will close. Yours truly"

Unfortunately, in spite of Dr. Hill's Consumption Cure, Miss Schultz died of consumption (Fig. 12). Hill continued to send out the statement that she was cured for a year after she was dead.


Gains 17 Pounds After Every One Gave Her Up.
Miss Ida Schultz had a terrible case of consumption, together with catarrh and bronchitis. With this terrible complication, given up to die, she took the Hill Treatment. She is now cured.
Amherst, Wis,
Dr. J. Lawrence Hill, Jackson, Mich.
Dear Doctor: I have been gaining rapidly. Have gained 17 pounds; weigh 150 pounds now and am getting quite strong, too. I wish you could see me. You would be surprised. I look just fine. Everybody says they never thought I would get well. I can't thank you enough for it. I am feeling just fine, so I will close.
Yours truly,
MISS IDA SCHULTZ.

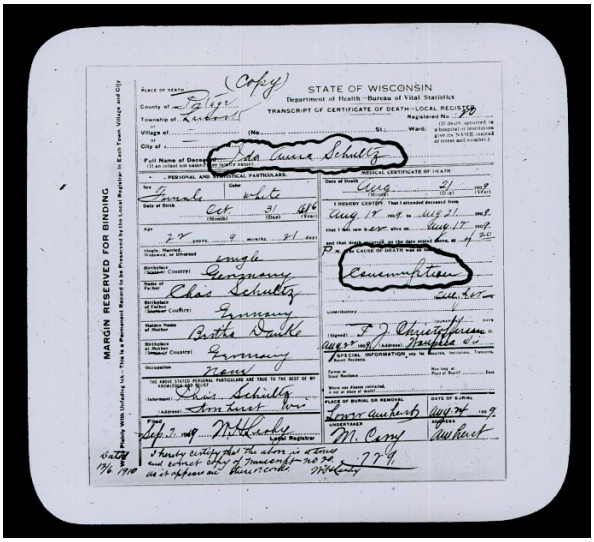
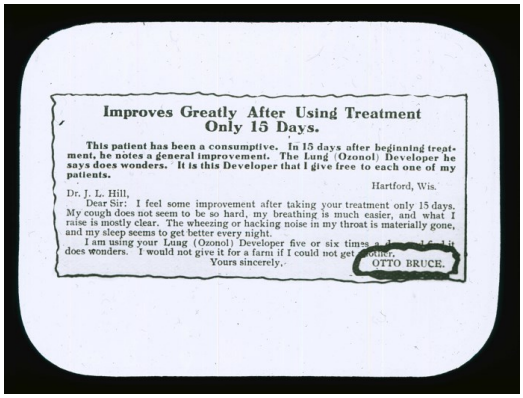


Fig. 12. Top: Slide showing the testimonial of Ida Schultz vouching for the curative powers of Dr. Hill's patent medicine. Bottom: Death certificate of Ida Schultz.

Her death, however, didn't deter Dr. Hill in the least. He published a similar claim for Otto Bruce (Fig. 13).

"This Patient had been a consumptive. In 15 days after beginning treatment, he notes a general improvement. The Lung (Ozonal) Developer he says does wonders. It is this developer that I give free to each one of my patients."

"Dear Sir, I feel some improvement after taking your treatment only 15 days. My cough does not seem to be so hard. My breathing is much easier and what I raise is mostly clear. The wheezing or hacking noise in my throat is materially gone, and my sleep seems to get better every night. I am using your Lung (Ozonal) Developer five or six times day and I feel it does wonders. I would not give it for a farm if I could not get another. Yours sincerely." He too died of consumption.


Improves Greatly After Using Treatment
Only 15 Days.
This patient has been a consumptive. In 15 days after beginning treatment, he notes a general improvement. The Lung (Ozonal) Developer he says does wonders. It is this Developer that I give free to each one of my patients.
Hartford, Wis.
Dr. J. L. Hill,
Dear Sir: I feel some improvement after taking your treatment only 15 days. My cough does not seem to be so hard, my breathing is much easier, and what I raise is mostly clear. The wheezing or hacking noise in my throat is materially gone, and my sleep seems to get better every night.
I am using your Lung (Ozonal) Developer five or six times
does wonders. I would not give it for a farm if I could not get
Yours sincerely,
OTTO BRUCE.

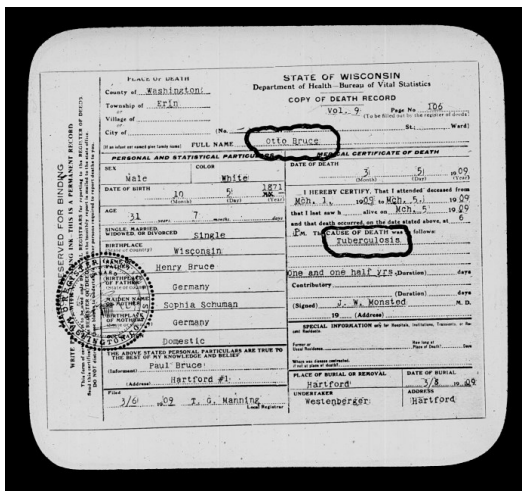
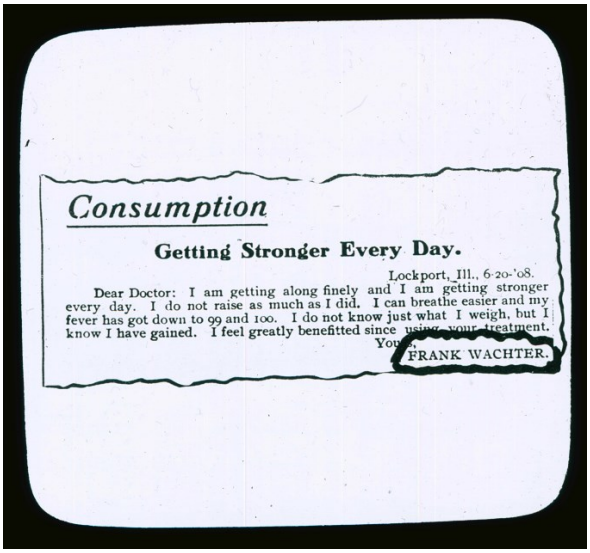


Fig. 13. Top: Slide showing the testimonial of Otto Bruce, attesting to the curative powers of Dr. Hill's patent medicine. Bottom: Death certificate of Otto Bruce.

Obviously not wanting to give up a good thing, Dr. Hill continued publishing testimonials, including one from Frank Watcher (Fig. 14).

"Dear Doctor, I am getting along finely and I am getting stronger every day. I do not raise as much as I did. I can breath easier and my fever has gone down to 99 and 100. I do not know just what I weigh, but I know I have gained. I feel greatly benefited since using your treatment."

Hill liked Frank's testimonial so much that he continued to use it for two years after the death of Frank Watcher from consumption.


Consumption
Getting Stronger Every Day.
Lockport, Ill., 6-20-'08.
Dear Doctor: I am getting along finely and I am getting stronger every day. I do not raise as much as I did. I can breathe easier and my fever has got down to 99 and 100. I do not know just what I weigh, but I know I have gained. I feel greatly benefitted since using your treatment.
Yours,
FRANK WACHTER.

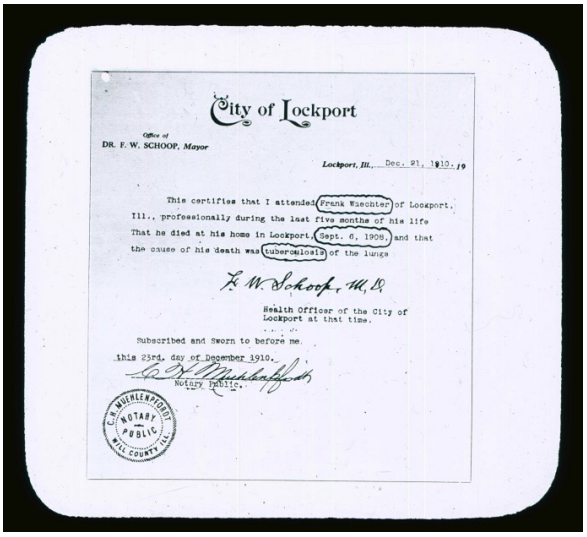
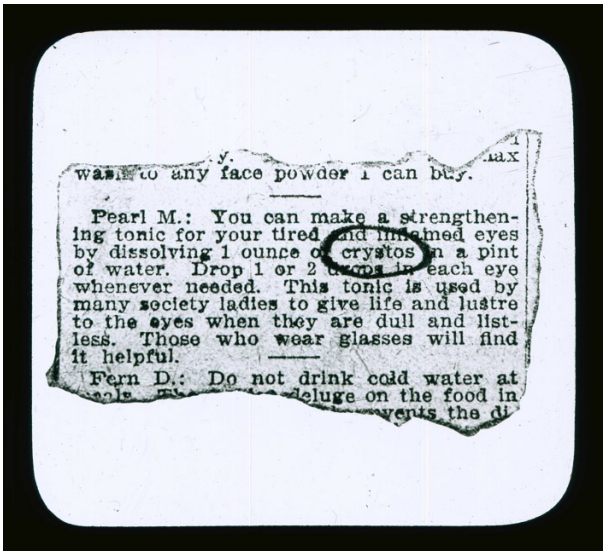

City of Lockport
Office of
DR. F. W. SCHOOP, Mayor
Lockport, Ill., Dec. 21, 1910.
This certifies that I attended Frank Wachter of Lockport, Ill., professionally during the last five months of his life That he died at his home in Lockport, Sept. 6, 1909, and that the cause of his death was tuberculosis of the lungs
F. W. Schoop, M. D.
Health Officer of the City of Lockport at that time.
Subscribed and Sworn to before me.
this 23rd. day of December 1910.
Notary Public.
NOTARY PUBLIC

Fig. 14. Top: Slide showing the testimonial of Frank Wachter, praising the curative powers of Dr. Hill's patent medicine. Bottom: Death certificate of Frank Wachter.

Women's Health and Advice Columns—A huge and highly financially rewarding marketing niche was the multitude of patent medicines marketed just for women. Modesty prevailed and women at that time were not comfortable talking to male doctors about their bodies and female issues. A major marketing strategy was to use fake "Beauty Columns" that offered curative advice and testimonials, while selling their medicines and cures. Fake questions to the "Correspondence" Department were a favorite method of advertising some patent Medicines. Each answer of course recommends some nostrum. For example, "Crystos" is a nostrum recommended in a fake "Beauty Column" for "Inflamed Eyes" (Fig. 15).


wash to any face powder I can buy.

Pearl M.: You can make a strengthening tonic for your tired and inflamed eyes by dissolving 1 ounce of crystos in a pint of water. Drop 1 or 2 drops in each eye whenever needed. This tonic is used by many society ladies to give life and lustre to the eyes when they are dull and listless. Those who wear glasses will find it helpful.

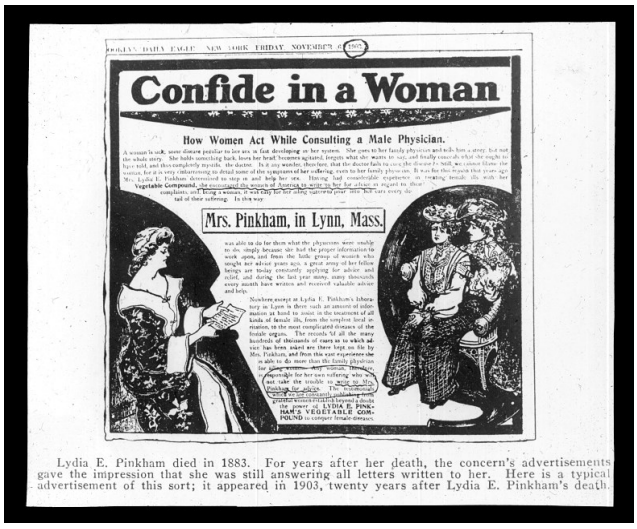
Fern D.: Do not drink cold water at

Fig. 15. Slide showing part of a women's health advice column.

"Pearl M. You can make a strengthened tonic for your tired and inflamed eyes by dissolving one ounce of Crystos in a pint of water. Drop 1 or 2 drops in each eye whenever needed. This tonic is used by many society ladies to give life and luster to the eyes when they are dull and listless. Those who wear sunglasses will find it helpful." The ingredients were Dried Borax, Common Salt and Boric Acid.

Others offered more dangerous advice. Mrs. S.D. Powers advised "To keep the face fresh coating the face with opium overnight, followed by a brisk wash of ammonia in the morning. For the women with sparse eyebrows and lashes mercury wax was often recommended." To get at that time the popular "near death look" women were advised to squeeze a few drops of citrus fruit or perfume into their eyes or some belladonna drops, which lasted longer or would cause blindness.

Lydia Pinkham of Lynn, Massachusetts was one of the more famous advice columnists (Fig. 16). In 1850 she offered a remedy for "those painful complaints and weaknesses so common to our best female population." She marketed her Vegetable Compound as a "women's tonic." Its ingredients included black cohosh, pleurisy root, unicorn root, life root and fenugreek seed. As did many patent medicines, Pinkham's original recipe contained approximately twenty percent alcohol, which Pinkham claimed was a preservative for the vegetable mixture. The ad appeared in 1903, and while filled with "helpful" advice, it also implored readers to write to her. This was 20 years after her death in 1883.


Confide in a Woman

How Women Act While Consulting a Male Physician.

Mrs. Pinkham, in Lynn, Mass.

Lydia E. Pinkham died in 1883. For years after her death, the concern's advertisements gave the impression that she was still answering all letters written to her. Here is a typical advertisement of this sort; it appeared in 1903, twenty years after Lydia E. Pinkham's death.

Fig. 16. Slide showing offer of personal health advice from Lydia Pinkham long after her death.

Advertising copy urged women to write to Mrs. Pinkham. They did, and they received answers. They continued to write and receive answers for decades after Pinkham's own death. These staff-written answers combined forthright talk about women's medical issues, advice, and, of course, recommendations for the company product. In 1905, the *Ladies' Home Journal* published a photograph of Lydia Pinkham's tombstone and exposed the ruse. The Pinkham Company insisted that it had never meant to imply that the letters were being answered by Lydia Pinkham, but by her daughter-in-law, Jennie Pinkham.

A prime area for testimonials and associated remedies was women's weight and figures. Having that "beautiful figure" was to be aggressively sought after. And of course, keeping one's ideal weight was ex-

tremely important. As alluded to at the beginning of the article weight was also a profitable target for patent medicines. An ad for Marmola promised, "No starvation diet required. No strenuous and possibly ill-advised exercise is necessary." If Marmola doesn't work, perhaps you should contact Lucille Kimball. After all, her cure may be worth taking to avoid those "weakening baths" (Fig. 17).

You May Be Forty But WHY Be FAT?
MARMOLA
20 MILLION BOXES SOLD SINCE 1907
I Can Make Your Fat Vanish by the Gallon!
I CONQUERED OBESITY PAST MIDDLE-AGE
Lucile Kimball,

Fig. 17. Slides showing ads for patent medicines to control body weight.

Epsom Salts, slightly perfumed and colored, were foisted on the public under the name "Spurmax" and sold at a fancy price of 50 cents while ingredients cost only one cent. Spurmax was highly recommended for facial care in a Correspondence Column (Fig. 18):

"A.A. I know just how you feel, but unless you discard powder and use a plain Spurmax lotion, you cannot expect to overcome the oily, "muddy" condition of your skin. Get four ounces of Spurmax and dissolve in one-half pint hot water, then add 2 teaspoons of glycerin. This makes an ideal lotion and will clear the skin of pimples, blackheads and other impurities. The Spurmax lotion is invisible when on, and does not rub or blow off. Using it gives the complexion a velvety smoothness and exquisite tint."

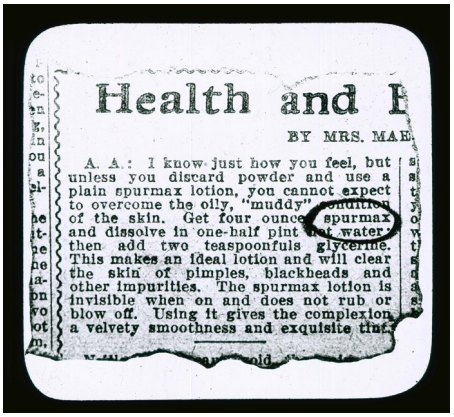

Health and
BY MRS. MAR
A. A.: I know just how you feel, but unless you discard powder and use a plain spurmax lotion, you cannot expect to overcome the oily, "muddy" condition of the skin. Get four ounces spurmax and dissolve in one-half pint hot water; then add two teaspoonfuls glycerine. This makes an ideal lotion and will clear the skin of pimples, blackheads and other impurities. The spurmax lotion is invisible when on and does not rub or blow off. Using it gives the complexion a velvety smoothness and exquisite tint.

Fig. 18. Slide showing health advice column advocating use of Spurmax.

Most of the freckle removers contained a dangerous caustic poison which may remove the skin as well as the freckles. A good example of this was Mercolized Wax, an "ammoniated mercury compound."

"How to Shed a Bad Complexion," from *Women's Realm* (Fig. 19):

"It is foolish to attempt to cover up or hide a sallow complexion, when you can easily remove the sallowness or the complexion itself. Rouge and the like on a brownish skin only emphasize the defect. The better way is to apply pure Mercolized Wax–the same as you would cold cream–putting it on at night, removing it in the morning with warm water and soap, following with a dash of cold water. The effect of a few applications is simply marvelous. The half dead cuticle is absorbed by the wax–painlessly, gradually, in tiny imperceptible particles- revealing the beautiful velvety white new skin beneath.

No women need have a sallow, blotchy, pimply or freckled complexion if she will just go to the chemist's and gets some good Mercolized Wax and used as suggested."

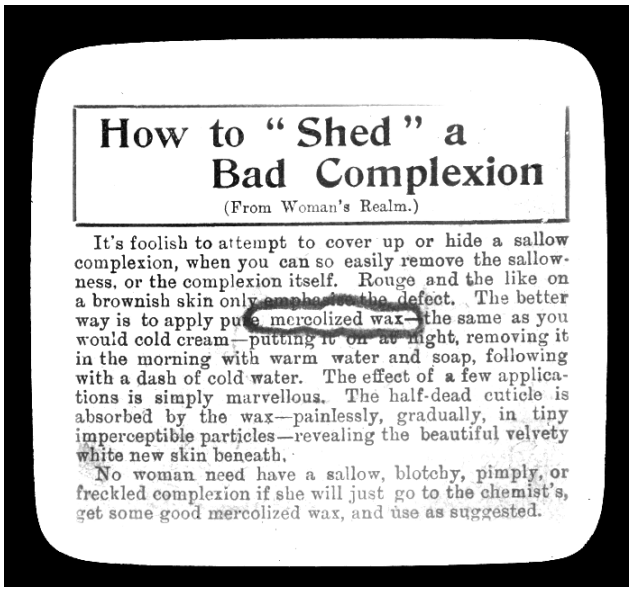

How to "Shed" a Bad Complexion
(From Woman's Realm.)
It's foolish to attempt to cover up or hide a sallow complexion, when you can so easily remove the sallowness, or the complexion itself. Rouge and the like on a brownish skin only emphasize the defect. The better way is to apply pure mercolized wax—the same as you would cold cream—putting it on at night, removing it in the morning with warm water and soap, following with a dash of cold water. The effect of a few applications is simply marvellous. The half-dead cuticle is absorbed by the wax—painlessly, gradually, in tiny imperceptible particles—revealing the beautiful velvety white new skin beneath.
No woman need have a sallow, blotchy, pimply, or freckled complexion if she will just go to the chemist's, get some good mercolized wax, and use as suggested.

Fig. 19. Slide showing an ad for Mercolized Wax, a compound said to improve the complexion.

Promoting the Exotic—Several of the slides in this set show ads promoting seemingly exotic ingredients, just as many cosmetics manufacturers do today. One of my all-time favorites is Dr. Kilmer's Swamp Root with unspecified roots found in swamps that had remarkable powers to cure and correct Kidney, Liver and Bladder disorders. It also was a cure for rheumatism, lumbago, and Bright's disease of the

the Kidneys, as well as invented illnesses like "Internal Slime Fever." Regardless of its name and questionable ingredients, Swamp Root was one the most successful and extremely profitable patent medicines. The fortune of Dr. Kilmore and his brother in the 1890s was estimated at $10,000,000-$15,000,000. After the 1906 Act, it went from a cure to a remedy (Fig. 20).

DR. KILMER'S
SWAMP-ROOT
Kidney, Liver & Bladder
CURE.
DIRECTIONS.
MAY TAKE one, two or three teaspoonfuls before or after meals and at bedtime.
Children less according to age.
May commence with small doses and increase to full dose or more, as the case would seem to require.
This great remedy cures all kidney, liver, bladder and uric Acid troubles and disorders due to weak kidneys, such as catarrh of the bladder, gravel, rheumatism, lumbago and Bright's Disease, which is the worst form of kidney disease.
It is pleasant to take.
PREPARED ONLY BY
DR. KILMER & CO.,
BINGHAMTON, N. Y.
Sold by all Druggists.
DR. KILMER'S
SWAMP-ROOT
Kidney, Liver & Bladder
REMEDY.
DIRECTIONS.
MAY TAKE one, two or three teaspoonfuls before or after meals and at bedtime.
Children less according to age.
May commence with small doses and increase to full dose or more, as the case would seem to require.
This great remedy corrects all kidney, liver, bladder and uric Acid troubles and disorders due to weak kidneys, such as catarrh of the bladder, gravel, rheumatism, lumbago and Bright's Disease, which is the worst form of kidney disease.
It is pleasant to take.
PREPARED ONLY BY
DR. KILMER & CO.,
BINGHAMTON, N. Y.
Sold by all Druggists.
DR. KILMER'S
SWAMP-ROOT
Kidney, Liver & Bladder
REMEDY.
DIRECTIONS.
MAY TAKE one, two or three teaspoonfuls before or after meals and at bedtime.
Children less according to age.
May commence with small doses and increase to full dose or more, as the case would seem to require.
This great remedy is recommended for kidney, liver, bladder and uric Acid troubles and disorders due to weak kidneys, such as catarrh of the bladder, gravel, rheumatism, lumbago and Bright's Disease, which is the worst form of kidney disease. It is pleasant to take.
PREPARED ONLY BY
DR. KILMER & CO.,
BINGHAMTON, N. Y.
Sold by all Druggists.
Reproduction (reduced) of three labels from Swamp Root bottles of different periods. Note the gradual modification from the "lie direct" to the "lie with circumstance."

Fig. 20. Slide showing label changes for Dr. Kilmer's Swamp-Root.

In a similar vein, nostrums supposedly derived from Native American themes were also useful: natives imagined to be noble savages, were thought to be in tune with nature and remedies appealed to the notion that Native Americans had special knowledge about herbal remedies and natural cures. One example of this approach was Kickapoo Indian Sagwa, a product of the Kickapoo Indian Medicine Company of Connecticut (completely unrelated to the real Kickapoo Indian tribe of Oklahoma), supposedly based on a Native American Recipe and sold through their famous Medicine Shows. This nostrum was the inspiration for AL Capp's 'Kickapoo Joy Juice," featured in the comic strip *Li'l Abner* (Fig. 21).

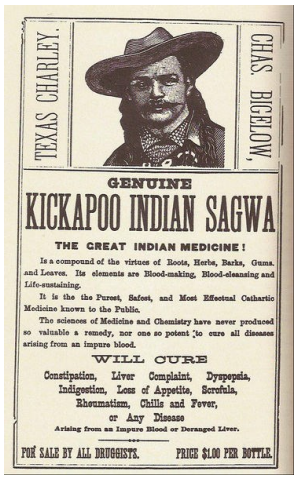

TEXAS CHARLEY.
CHAS. BIGELOW.
GENUINE
KICKAPOO INDIAN SAGWA
THE GREAT INDIAN MEDICINE!
Is a compound of the virtues of Roots, Herbs, Barks, Gums, and Leaves. Its elements are Blood-making, Blood-cleansing and Life-sustaining.
It is the the Purest, Safest, and Most Effectual Cathartic Medicine known to the Public.
The sciences of Medicine and Chemistry have never produced so valuable a remedy, nor one so potent to cure all diseases arising from an impure blood.
WILL CURE
Constipation, Liver Complaint, Dyspepsia, Indigestion, Loss of Appetite, Scrofula, Rheumatism, Chills and Fever, or Any Disease
Arising from an Impure Blood or Deranged Liver.
FOR SALE BY ALL DRUGGISTS. PRICE $1.00 PER BOTTLE.

Fig. 21. Advertisement for Kikapoo Indian Sagwa, said to cure "any disease."

Today patent medicines are still prevalent with their ingredients and herbal blends typically marketed as "nutritional supplements." Newsprint, star endorsements and testimonial hyperbolae still abound. Many Patent medicine brand names (e.g. Absorbine, Bayer Aspirin, Geritol, Lydia Pinkham's Vegetable Compound) are still marketed for health purposes - less alcohol and opium. Others (e.g. Coca Cola, Angostura Bitters, Tonic Water) have been reformulated and repurposed with no curative assertions. While magic lantern slides are no longer used to project their claims, Patent Medicines and their curative assertions live on.

References

Historical background for the images shown in the patent medicine lantern slides came from the following web sites:

Patent Medicine: Cures & Quacks, Peggy M. Baker Director & Librarian, Pilgrim Society & Pilgrim Museum, www.pilgrimhallmuseum.org/pdf/Patent_Medicine.pdf

History of Patent Medicine, https://www..hagley.org/research/digital-exhibits-patent-medicines

Patent Medicine 1860-1920, https://dp.la/exhibitions/patent-medicine/1860-1920/opiates-alcohol-herbs

Women's Health and Household Hints, https://dp.la.exhibitions/patent -medicine/woman -health-households-hints/household-hint

The Poisonous Beauty Advice Columns of Victorian England, Natalie Zarrelli, 12/17/15, p.5, https://www.atlasobscura.com/articles/the-poisonous-beauty-advice-columns-of-victorian-england

15 Curious Quack Remedies From the Age of Patent Medicine/ Mental Floss Website, Allison C. Meier, 9/11/2015 http://mentalfloss.com/article/85554/15-curious-quack-remedies-age-patent-medicine

Patent Medicine, https://wikipedia.org/wiki/Patent_Medicine

The Research Page presents summaries of recent academic research on topics related to the magic lantern. For a comprehensive bibliography of research articles, see: https://www.zotero.org/groups/magic_lantern_research_group

Koji Toba. 2019. On the relationship between documentary films and magic lanterns in 1950s Japan. *Arts* 8, 64 (doi:10.3390/arts8020064) (open access journal available at www.mdpi.com/journal/arts).

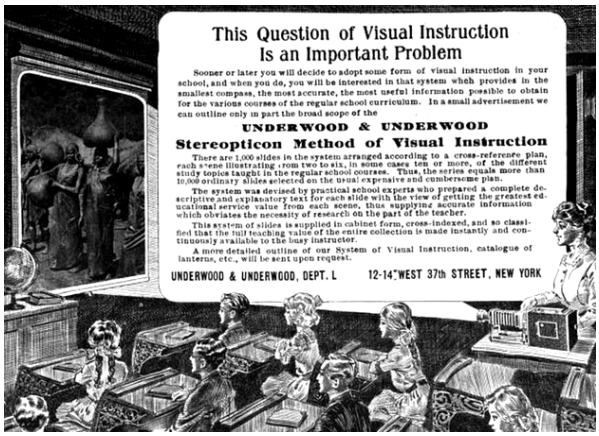
This paper discusses a uniquely Japanese use of the term "magic lantern." In Japanese, the word gentō refers to western style magic lanterns, as opposed to the wood magic lanterns many of us have seen performed at our conventions. The term was retained into the 1930s for magic lanterns used to show glass slides in schools. In 1941, the Ministry of Education introduced a new form of magic lantern that showed a series of still pictures run through the lantern on 35 mm movie film, but without the movement. This essentially was a film strip projector, except the film strip moved past the lens horizontally, like a traditional magic lantern, instead of vertically like an American film strip projector. These were used in conjunction with movie projectors for instructional purposes and wartime propaganda.

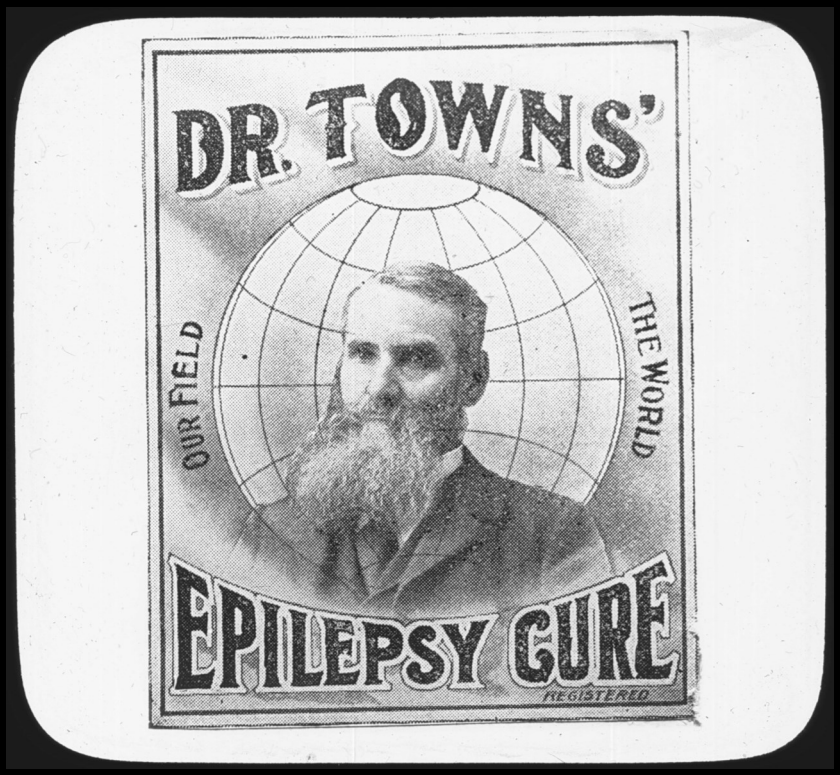
After World War II, the occupation government introduced American film strip projectors into Japanese schools. These were the same projectors familiar to those of us who were in school in the 1950s and 60s, where we dozed through tedious film strip lectures on hygiene, physical fitness, and food groups. These were used along with the Japanese models during the 1950s for educational purposes. One unusual feature of Japanese "magic lantern films" is that images sometimes were photographed in black and white and then hand-colored, as with traditional glass magic lantern slides. In other cases, images were photographed on color film.

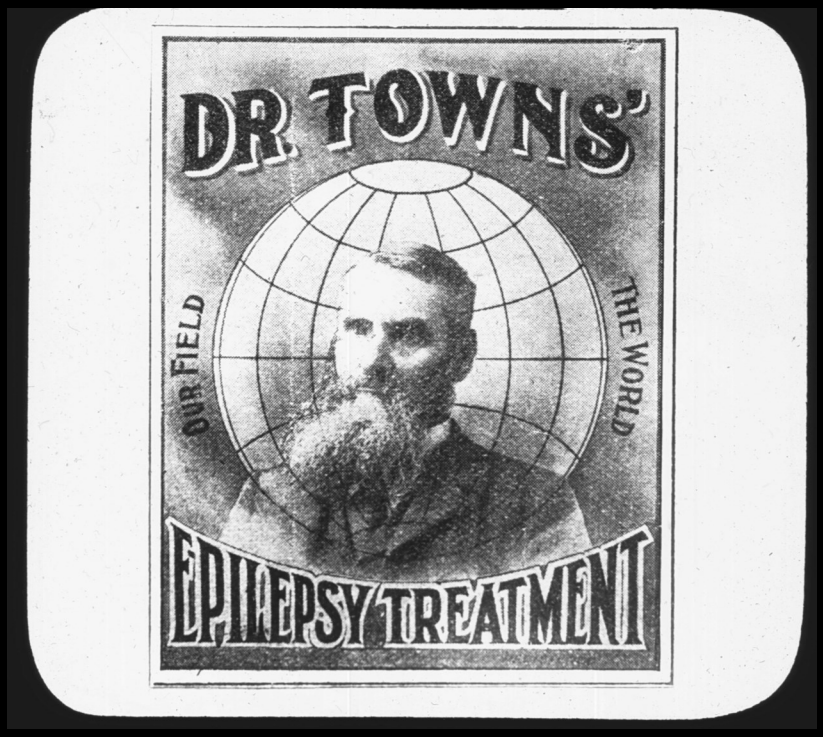
The author describes examples in which a documentary film (motion picture) and a magic lantern film were produced on the same subject, including *Pictures of the Atomic Bomb*, based on a series of painted scenes. The documentary film was in black and white, whereas the magic lantern film was in color. The two forms of presentation also differed considerably in content and narrative style. Another example was a documentary film on rural education in Japan, along with a magic lantern film on the same subject. The former used paid actors to dramatize the story, whereas in the latter, the actual subjects appeared as themselves in the photographs.

Katie Day Good. 2019. Sight-seeing in school: visual technology, virtual experience, and world citizenship in American education, 1900-1930. *Technology and Culture* 60:98-131.

This article analyses the use of visual technologies to "bring the world to the pupil" in American schools in the first third of the 20th century. The main focus is on three forms of visual media that originated in the 19th century: photographic lantern slides, stereographs, and illustrated magazines. By the early 20th century, three companies in particular targeted schools in their marketing campaigns: Underwood & Underwood and the Keystone View Company, both of which sold lantern slides and stereographs, and The National Geographic Society, which marketed both its magazine and individual cardboard-mounted photographs to schools. The author gives a comprehensive overview of the cultural factors that promoted the use of visual media to educate students about world geography and world cultures, as well as the marketing strategies used by producers of visual media. She discusses the Keystone 600 set of lantern slides and stereographs of the same images of countries around the world, although she seems to have missed the previous work of Artemis Willis on the same topic (Artemis Willis. 2015. Between nonfiction screen practice and nonfiction peep practice: the Keystone '600 Set' and the geographical mode of representation. *Early Popular Visual Culture* 13:293-312). Despite the efforts of Keystone and other companies to market their products as a valuable innovation for teaching geography, some educators found their sets of repackaged travelogue slides and stereographs to be more suited to their original purpose of home entertainment than to the classroom.


This Question of Visual Instruction
Is an Important Problem
Sooner or later you will decide to adopt some form of visual instruction in your school, and when you do, you will be interested in that system which provides in the smallest compass, the most accurate, the most useful information possible to obtain for the various courses of the regular school curriculum. In a small advertisement we can outline only in part the broad scope of the
UNDERWOOD & UNDERWOOD
Stereopticon Method of Visual Instruction
There are 1,000 slides in the system arranged according to a cross-reference plan, each scene illustrating from two to six, in some cases ten or more, of the different study topics taught in the regular school courses. Thus, the series equals more than 10,000 ordinary slides selected on the usual expensive and cumbersome plan.
The system was devised by practical school experts who prepared a complete descriptive and explanatory text for each slide with the view of getting the greatest educational service value from each scene, thus supplying accurate information which obviates the necessity of research on the part of the teacher.
This system of slides is supplied in cabinet form, cross-indexed, and so classified that the full teaching value of the entire collection is made instantly and continuously available to the busy instructor.
A more detailed outline of our System of Visual Instruction, catalogue of lanterns, etc., will be sent upon request.
UNDERWOOD & UNDERWOOD, DEPT. L
12-14 WEST 37th STREET, NEW YORK





Above: Lantern slides showing a change in labelling from Cure to Treatment following the passage of the Pure Food and Drug Act of 1906.

Front cover: Image from a lantern slide lecture on the health dangers posed by house flies, entitled "How long shall we two eat together?"